

February 20, 1877.

Professor Flower, F.R.S., V.P., in the Chair.

A communication was read from Professor Owen, C.B., F.R.S., containing an account of the additional evidence recently obtained as to the occurrence of extinct gigantic birds of the unwinged group allied to *Dromornis* in Australia. The specimens upon which Prof. Owen's remarks were based consisted of a pelvis obtained by Mr. W. B. Clarke from what is termed locally the "Canadian lead," at a depth of from 150 to 200 feet, in the county of Phillip, New South Wales, and of a mutilated left tibia, stated to have been found in a cave in Mount Gambier, South Australia.

This paper will be published in the Society's 'Transactions.'

Mr. Osbert Salvin, F.R.S., exhibited a volume of original drawings taken by Mr. George Raper during the voyage of Capt. Hunter to Australia in 1788-92, and made the following remarks:—

"Though the north-eastern side of New Ireland was discovered as early as 1616 by Le Maire and Schouten<sup>1</sup>, and the passage between New Britain and New Guinea by Dampier in 1700, it was not until September 1767 that the channel between New Britain and New Ireland was discovered by Carteret<sup>2</sup>, and named by him St. George's Channel.

"From him and from Dampier most of the salient geographical features of the immediate district received names, including the Duke-of-York Island, which lies in St. George's Channel. Carteret, however, though he seems to have carefully examined the southern end of New Ireland, did not attempt to land on Duke-of-York Island, but passed to the eastward of it. Captain John Hunter, when in command of the transport 'Waaksambeyd,' one of the ships which conveyed the first convicts to Botany Bay and Norfolk Island under Governor Phillip, appears to have been the first person actually to visit this island, and in his 'Historical Journal,' chap. ix.<sup>3</sup>, gives a full account of the doings of himself and his ship's company there, as well as a description of the vegetation and scenery of it and the adjoining islands.

"With reference to this voyage I now exhibit some water-colour sketches which have recently come into Mr. Godman's and my possession, and which were made by one George Raper, who was evidently in the ship with Capt. Hunter. In them are depicted scenes connected with the voyage of the 'Sirius' and 'Supply,' the two vessels which conveyed the first convicts to Australia; and with them are views of Port Jackson, Norfolk Island (then covered with pines),

<sup>1</sup> 'Directions for the Pacific Ocean,' by A. G. Findlay, part ii.

<sup>2</sup> Hawkesworth's 'Voyages,' i. p. 595.

<sup>3</sup> 'Historical Journal of the Transactions at Port Jackson and Norfolk Island, with the discoveries which have been made in New South Wales and in the Southern Ocean since the publication of Phillip's Voyage,' &c. 4to: London! 1793.

and other places, as well as several objects of natural history, including the white Gallinule (*Fulica alba*) of Lord Howe's Island. One of these drawings represents "Port Hunter," Duke-of-York Island, and, no doubt, gives a fair idea of the island as it then existed.

"Several of the French expeditions visited these islands. De Bougainville<sup>1</sup> in 1768, the year after Carteret's discoveries, spent some days at the southern end of New Ireland, and named the small cove at the eastern end of Gowan's Harbour 'Port Praslin.' This spot was afterwards visited by Duperrey in the 'Coquille' in 1823; and here the only entomological collections which have hitherto reached Europe from this island were made. These were described in the Zoology of the Voyage of the 'Coquille' by Guérin-Méneville; and several of the butterflies are figured in the atlas of that work.

"The different explorers who have visited these islands seem to have been variously impressed with them, according, perhaps, to the season of the year when they were there. All, however, extol the richness of the verdure, the extent of the forests, as well as the grandeur of the scenery of both New Britain and New Ireland; but the climate is very humid, and the rainfall at times excessive."

The following papers were read:—

1. On the Birds collected by Mr. George Brown, C.M.Z.S., on Duke-of-York Island, and on the adjoining parts of New Ireland and New Britain. By P. L. SCLATER, M.A., Ph.D., F.R.S., Secretary to the Society.

[Received February 19, 1877.]

(Plates XIV.—XVI.)

I am now in a position to give the Society a better account of the collection of Birds made by our Corresponding Member, Mr. George Brown, in Duke-of-York Island and on the adjacent portions of New Ireland and New Britain, which I exhibited at our second meeting in January last<sup>2</sup>. Before, however, I do this, I will make a few preliminary remarks, to serve as an introduction to this and the papers to follow, which some of my friends have been kind enough to prepare, on other branches of Mr. Brown's collections.

For my first introduction to Mr. Brown, I am indebted to Dr. F. Müller, the well-known botanist, of Melbournè, who wrote to me in 1874 pointing out Mr. Brown's enthusiastic love for natural history, and recommending his election as a Corresponding Member of the Society. Mr. Brown was at that time attached to the Wesleyan Mission in the Samoan group, but shortly afterwards returned to Sydney, and was sent out as the leader of a new Wesleyan Mission at Port Hunter, Duke-of-York Island. Mr. Brown left Sydney in

<sup>1</sup> 'A Voyage round the World,' by Lewis de Bougainville, translated by John Reinhold Forster. 4to: London, 1773.

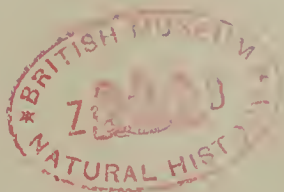
<sup>2</sup> See above, p. 28.



J. Smit del & lith.

M&N Hanhart imp

Fig 1. MONARCHA VERTICALIS.  
2. DICÆUM EXIMIUM.





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Smit hth

M&N Hanhart imp

ARTAMUS INSIGNIS.





J. Smit lith

PHLOGŒNAS JOHANNÆ

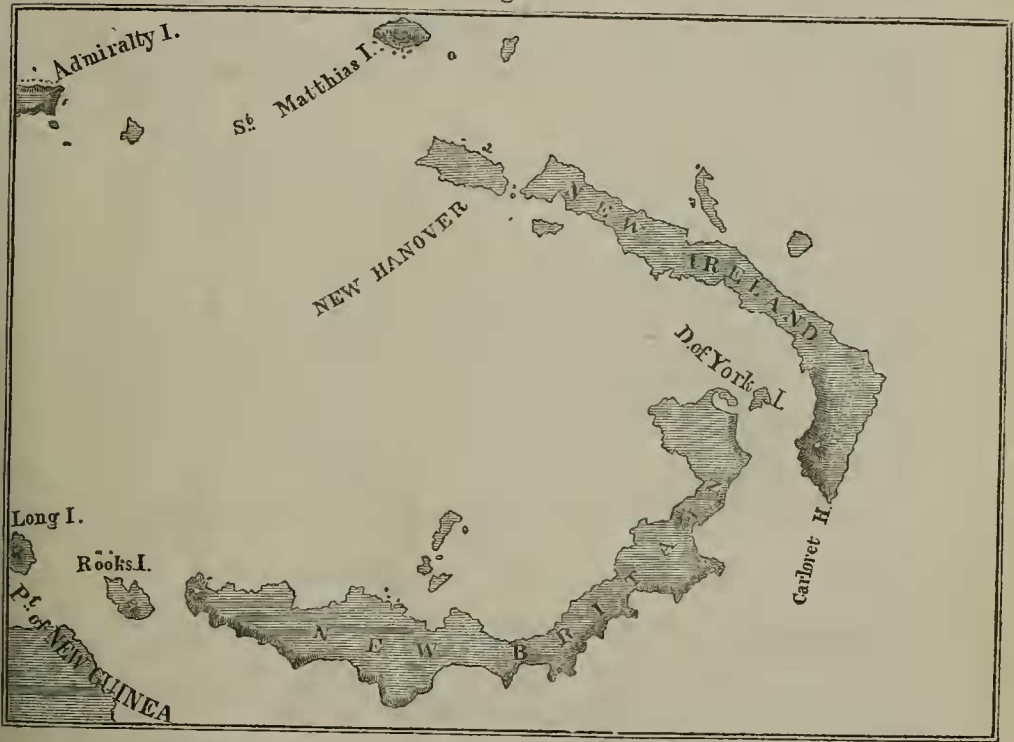
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April 1875 in the 'John Wesley,' and, after a visit to several mission-stations, arrived at Port Hunter in the August following. Here he at once proceeded to collect living specimens for the Society, and in September 1875 wrote to me announcing the dispatch to Sydney<sup>1</sup> of a number of birds, of which, I regret to say, only the Cassowaries eventually reached us alive<sup>2</sup>. In replying to Mr. Brown, I took the opportunity of pointing out to him the very interesting nature of the locality in which he was resident, and of assuring him that I would do my best to see that any zoological specimens that he might be able to collect there were properly worked out, and that due credit was given to him.

Fig. 1.



Outline Map of Duke-of-York Island, New Britain, and New Ireland, from the Admiralty Chart.

Mr. Brown returned to Sydney in October last, bringing with him the collection which we have before us this evening, in making which he had, I believe, the assistance of Mr. Cockerell, a young Australian naturalist and collector. Mr. Brown's letters, however, do not contain details upon the manner, nor, I regret to say in many cases, upon the exact localities in which his specimens were obtained; but I gather

<sup>1</sup> See extract from his letter, P. Z. S. 1875, p. 2.

<sup>2</sup> See P. Z. S. 1876, p. 413, where these birds are determined as *Casuarinus bennetti*. But until these birds are adult this determination must be considered provisional only.

from his correspondence, and from notices in several newspapers and journals<sup>1</sup>, that Mr. Brown's head quarters during the year which he passed in this district were Port Hunter, Duke-of-York Island, where is the Wesleyan Church and Mission, and that frequent excursions were made thence to the adjoining large islands of New Britain and New Ireland. Writing on February 4th, 1876, he speaks of having been seven times over to New Ireland in three months, and of there being missionary stations at Nodup and Matupi in New Britain, both occupied by native teachers. It may be assumed, therefore, that Mr. Brown's collections were formed on those parts of the islands of New Britain and New Ireland which are nearest to Duke-of-York Island<sup>2</sup>, as shown in the accompanying outline chart (p. 97).

The collection of birds which Mr. Brown has transmitted to me for determination consists of 89 skins, belonging to 70 species, of which 10 appear to be new to science, as shown in the subjoined Table.

	Skins.	Species.	New to Science.
I. Passeres.....	25	20	5
II. Coccyges .....	16	13	1
III. Psittaci .....	10	8	1
IV. Striges .....	1	1	1
V. Accipitres .....	5	4	
VI. Herodiones .....	3	2	
VII. Columbæ .....	20	13	2
VIII. Gallinæ .....	1	1	
IX. Fulicariæ .....	1	1	
X. Limicolæ .....	5	5	
XI. Gaviæ.....	2	2	
	89	70	10

The following is a detailed account of them<sup>3</sup> :—

1. *CISTICOLA RUFICEPS*, Gould, B. Austr. iii. pl. 45 (?).

Apparently a worn specimen of this species, which Mr. Sharpe

<sup>1</sup> See Wesleyan Missionary Notices for Feb. 1876, p. 28, and Jan. 1877, p. 17.

<sup>2</sup> Since this paper was read I find that Mr. Brown has sent a communication to the Royal Geographical Society on his expedition to Duke-of-York Island. It appears from this memoir (which, through Mr. Bates's kindness, I have had the opportunity of reading in MS.) that Duke-of-York Island is not, as is marked on the chart, one island, but a group of twelve islands, of which seven are inhabited. Mr. Brown states that he examined about 130 miles of the coast of New Ireland, from Cape Bougainville northward, and crossed the island from west to east, at a point N.N.E. of Duke-of-York Island. On New Britain Mr. Brown examined the coast from Cape Orford and Spacious Bay to Cape Palliser on the west, and thence round Blanche Bay, and as far as Port Weber at the head of a deep bay about 20 miles east of Cape Lambert. The collections sent were therefore, we may presume, all made within these limits.—P. L. S.

<sup>3</sup> Prof. Salvadori, to whom I transmitted Mr. Brown's collection for examination, has most kindly furnished me with some notes on the specimens, of which, at his request, I have not hesitated to make use.

tells me occurred also in Mr. Stone's collection from the south of New Guinea. The exact locality is not given.

## 2. PITTA MACKLOTI, Müll. & Schl.

One example, New Britain, Feb. 1876.

I was at first inclined to separate this *Pitta* from *P. mackloti*, on account of its having a blue line on the crown, as in *P. celebensis*; but Prof. Salvadori assures me that "some specimens from Batanta, Waigiu, and Andai have this mark equally conspicuous." The occurrence of a *Pitta* in New Britain is a fact of great interest.

## 3. SAULOPROCTA MELALEUCA (Quoy et Gaim.).

*Muscipeta melaleuca*, Quoy et Gaim. Voy. de l'Astrol. i. p. 180, t. 4. f. 3.

*Sauloprocta melanoleuca*, Cab. Mus. Ornith. Hein. p. 57.

*Sauloprocta melaleuca*, Sel. P. Z. S. 1869, p. 119.

*Sauloprocta tricolor*, Salvad. et D'Alb. Ann. Mus. Civ. Gen. vii. p. 23.

The locality of Mr. Brown's specimen is not marked; but the species was first obtained in New Ireland. It is also found in the Solomon Islands and New Guinea. Whether *Muscipeta tricolor*, Vieillot, ex Timor (*Maugé*), is identical must remain uncertain until specimens from that island have been compared. Wallace does not include the species in his Birds of Timor (P. Z. S. 1863, p. 485).

## 4. RHIPIDURA SETOSA.

*Muscipeta setosa*, Quoy et Gaim. Voy. de l'Astrol. i. p. 181, t. 4. f. 4 (1830).

*Rhipidura setosa*, G. R. Gray, Gen. B. i. p. 259, et Cat. B. Trop. Isl. p. 17.

*Rhipidura gularis*, Müller et Schl. Verh. Ethn. p. 185 (1839-44).

One skin of this species, being from Duke-of-York Island, is, no doubt, the true *R. setosa*, originally described from New Ireland; but I suspect it is also scarcely different from *R. gularis* of New Guinea, and that these two species will have ultimately to be united. Cf. Meyer, Sitz. Ak. Wien, lxi. p. 503.

## 5. MONARCHA VERTICALIS, sp. nov. (Plate XIV. fig. 1.)

*Super ater*: uropygio, primariorum tectricibus mediis et secundariorum omnibus albis: frontis, faciei, regionis ocularis, et gutturis totius plumis nigris, exstantibus, quasi squamosis, fascia verticali alba ex similibus plumis composita: abdomine et subalaribus albis: rostro et pedibus nigris: rictu setis rigidis munito: long. tota 6.0, alæ 3.3, caudæ 2.11.

*Hab.* Duke-of-York Island (Oct. 1875).

*Obs.* Sp. *Monarchæ loricatæ*, Wall. (P. Z. S. 1863, p. 29, pl. vi.),

affinis, sed cauda nigra, uropygio et macula verticali albis dignoscenda.

#### 6. MONARCHA CHRYSOMELAS.

*Muscicapa chrysomela*, Garn. Voy. de la Coq. Zool. i. p. 594, Atl. t. 18. f. 2.

*Monarcha chrysomela*, Sw. Class. B. ii. p. 257.

*Monarcha cordensis*, Cab. et Reich. Journ. f. Orn. 1876, p. 320 (?).

The locality for this species given in the text of the ' Voyage of the Coquille ' is New Zealand ; that given on the plate is New Ireland, which is, no doubt, correct.

The New-Guinea bird commonly assigned to this species is conspicuously different, having the greater part of the back black. I propose to call it *Monarcha melanonotus*<sup>1</sup>. On the other hand, the form from Kordo, which Meyer has recently named *M. kordensis* (Sitz. Ak. Wien, lxi. p. 252), comes near the typical *M. chrysomelas*, but has the black colour rather wider on the back, and extending further down on the throat. In *M. kordensis* also, the black colour narrowly surrounds the eye, which is not the case in *M. chrysomelas*.

*M. chrysomelas* is sometimes referred to the genus *Arses* of Lesson ; but the first species in Lesson's list (Traité d'Orn. p. 387), which I suppose must be regarded as the type, is *Arses telescopthalma*, which certainly belongs to a different form. I may also remark that *Arses kaupi* of Australia being little more than a representative form of *A. telescopthalma*, the institution of a separate genus (*Ophryzone*) for the former, as has been proposed by Mr. Ramsay (P. Z. S. 1868, p. 383), is unnecessary, and that *Ophryzone*=*Arses*.

#### 7. MONARCHA ALECTO.

*Drymophila alecto*, Temm. Pl. Col. 430. fig. 1 (♂).

*Monarcha alecto*, Meyer, Sitz. Ak. Wien, lxi. p. 504.

*Muscicapa chalybeocephalus*, Garn. Voy. de la Coq. Zool. i. p. 589, Atl. t. 15. f. 2 (♀).

*Monarcha chalybeocephalus*, Salvad. Ann. Mus. Genova, vii. p. 768.

*Piezorhynchus nitidus*, Gould, B. Austr. ii. pl. 88.

New Ireland is the original locality of Garnot's *Muscicapa chalybeocephalus* ; and Mr. Brown sends us a pair of birds from Duke-of-York Island, collected in October 1875, the female of which quite agrees with Garnot's figure and description.

I have compared them with a series of *Piezorhynchus nitidus* from Cape York, collected by Mr. Cockerell, and now in Mr. Godman's collection, and can find no tangible differences.

I have also examined skins of the same bird from New Guinea, and am quite inclined to agree with Dr. Salvadori's views (*l. s. c.*) as to its range and synonyms. Dr. Meyer seems to have arrived at

<sup>1</sup> The form from Aru, *M. aruensis*, Saly. (Ann. Mus. Civ. Genoa, vi. p. 309), appears to have the back as black as the Papuan form.

nearly the same results, and I use the name *alecto*; which he adopts, for the reasons which he gives.

8. *ARTAMUS INSIGNIS*, sp. nov. (Plate XV.)

*Candidus*: capite cum cervice undique, alis et cauda nigerrimis: remigum et rectricum pagina inferiore cineraceo; subalaribus albis: rostro cæruleo, pedibus fuscis: long. tota 7·7, alæ 5·8, caudæ 2·5.

*Hab.* New Ireland (March 1876).

*Obs.* Diversus ab *A. monacho* capite alis et cauda nigris.

Here is a second instance of a repetition on the further side of New Guinea of a Celebesian type, *A. monachus* of Celebes being certainly the nearest known ally of this fine new species.

I have examined a specimen of *A. melaleucus* (Forst.) of New Caledonia in the British Museum, but find it quite distinct, having the upper back black. *A. maximus*, Meyer, of New Guinea, is of the same large size as the present bird, but has the whole back black.

9. *GRAUCALUS PAPUENSIS* (Gm.).

I refer a single skin without exact locality to the wide-ranging *Graucalus papuensis*, as understood by Salvadori (Ann. Mus. Gen. vii. p. 771) and Meyer (Sitz. Ak. Wien, lxix. p. 505).

10. *EDOLIOSOMA*, sp. inc. (♀).

A single skin, without exact locality, belongs to a female of one of the species of this genus—perhaps *E. muelleri*, Salvad. (= *plumbeum*, Müll. nec Wagler). A very nearly similar skin in the British Museum is marked *E. schisticeps* (G. R. Gray).

11. *LALAGE KARU*.

*Ceblepyris karu*, Less. Voy. Coq. Zool. p. 633, Atl. t. xii.

*Lalage karu*, Salvad. Ann. Mus. Gen. ix. p. 28.

A male of this species from Duke-of-York Island (Oct. 1875). It was originally established on specimens from New Ireland.

12. *DICRANOSTREPTUS MEGARHYNCHUS*.

*Edolius megarhynchus*, Quoy et Gaim. Voy. Astrol. Zool. i. p. 184, Atl. t. 6.

*Dicrurus megarhynchus*, Scl. P. Z. S. 1869, p. 119.

A skin of this fine species, from New Ireland, which is, I believe, its true *patria*. Quoy and Gaimard say Havre Dorey, New Guinea; but this is in all probability an error, as subsequent collectors have not obtained it in New Guinea.

The specimen in the British Museum is likewise from New Ireland, obtained in Carteret Harbour by Capt. Lambrick, R.N.

13. *DICRURUS LEMO-STICTUS*, sp. nov.

*Nigerrimus*: alis caudaque extus æneo nitentibus: capitis, cervicis undique et pectoris antici plumis nitente æneo maculatis, his

*maculis in gutture et in pectore rotundis, distinctis: habitu generali D. carbonarii: long. tota 11·3, alæ 6, caudæ rectr. ext. 5·4, med. 4·6.*

*Hab.* New Britain (October 1875).

This Drongo, of which there is one skin in Mr. Brown's collection, obtained in New Britain in October 1875, belongs strictly to the same group as *D. carbonarius* of New Guinea and *D. bracteatus* of Australia. I should have been rather inclined to refer it to the former species; but as Mr. Sharpe, who has lately been engaged on this difficult family, points out to me, if *D. pectoralis*<sup>1</sup> of the Sula Islands is to be considered distinct, then this bird must also be allowed equal rank; for in it the round feather-spots on the breast are quite as large and well-marked as in *D. pectoralis*, and extend moreover over the throat.

This appears to be another case of the recurrence of Celebesian forms to the east of New Guinea.

14. *DICÆUM EXIMIUM*, sp. nov. (Plate XIV. fig. 2.)

*Supra saturate æneo-viride, pileo et capitis lateribus brunnescentibus: uropygio coccineo: subtus album, fascia pectorali angusta coccinea: lateribus et ventre medio fusciscenti-schistaceis, hypochondriis sicut dorso æneis: subalaribus albis: rostro et pedibus nigris: long. tota 3·3, alæ 2·0, caudæ 1·0.*

*Hab.* New-Ireland (March 1876).

This *Dicæum* is quite distinct from any species known to me. It is just possible that *D. æneum* of the 'Voyage au Pôle Sud' may be the female of it.

15. *NECTARINIA ASPASIA*.

*Cinnyris aspasia*, Less. Voy. Coq. Zool. i. p. 676, Atl. t. 30. fig. 4.

Three skins (♂, ♂ gr. et ♀) of this Sun-bird from Duke-of-York Island. Mr. Shelley, who is now monographing this beautiful group of birds, kindly sends me the subjoined remarks on them:—

"It is most interesting to find the true *C. aspasia* from Duke-of-York Island. Previously this bird was known to be a native of at least two thirds of the northern portion of New Guinea, and to extend westward to the islands of Popo and Mysol. The specimens from Popo island have a slightly more lilac tinge to the throat, but are not sufficiently distinct in my opinion for specific separation. Lesson's type of *C. aspasia* came from Havre Dorey; and specimens received thence agree in every respect with the adult male from Duke-of-York Island, which may be thus described. General plumage blue black; forehead, crown and nape metallic green; least and median series of wing-coverts, the scapulars, the lower half of the back, the upper tail-coverts, and the edges of the tail-feathers metallic green, faintly shaded with steel-blue, in that respect contrasting with the colour of the crown, which is rather golden than blue-green; beneath, chin and throat steel-blue, very faintly shaded with lilac.

<sup>1</sup> Wallace, P. Z. S. 1862, p. 342.

“This short description of the plumage is quite sufficient to show that the New-Ireland bird is truly *C. aspasia*; the rather more golden shade of the crown is certainly too slight to be of any importance. The steel-blue throat is so faintly shaded with lilac that it shows its affinities to be rather with the Dorey type than with the Popo bird.

“I shall now give the measurements, that they may be compared with two specimens, one from Dorey, and one from Mysol, in the British Museum.

	Length. in.	Culmen. in.	Wing. in.	Tail. in.	Tarsus. in.
New Ireland . . . . .	4·2	0·65	2·35	1·7	0·65
Dorey . . . . .	4·2	0·65	2·4	1·5	0·55
Mysol . . . . .	4·0	0·70	2·4	1·5	0·60

“The adult female from Duke-of-York Island has the breast bright sulphur-yellow, barely tinted with olive towards the front of the chest, and the under tail-coverts slightly paler. The throat is ashy tinted white. The upper part of the head and back of the neck ash-grey, the back and the edges of the wing-feathers olive-yellow, the black tail with the white tips to some of the outer feathers, are characters agreeing perfectly with the other females I have seen of this species. The paler and brighter underparts are apparently only due to the skin having been less exposed to the blackening influence of the London atmosphere.

“The young male, or, perhaps, more properly the male in moult resembles the female, excepting that the sides of the throat and a few of the middle feathers are steel-blue, and on the front of the chest there are a few black feathers, the first signs of the coming adult plumage.

“In Mr. Godman’s collection there are two specimens of this bird, said to have been obtained at Cape York, Australia. This extension of the range so far south as Australia appeared somewhat improbable for a member of the ‘*Hermitimia*’ group, considering how extremely limited is the range of all the other species of this group.

“This species, however, was known to be the most widely spread of the ‘*Hermitimia*’ group and now that we find that it extends so far eastward as Duke-of-York Island, we have little reason to doubt its extending also southward to Cape York; and on examination of the two specimens in Mr. Godman’s cabinet, it will be seen that the Cape-York specimens have the violet shade on the throat, indicative of the western form of this species as found at Popo and Mysol, but agree in the colouring of the crown with the true *C. aspasia* from Dorey, and not with the type specimen of *Hermitimia chlorocephala*, Salvadori, from the Aru Islands.”

#### 16. NECTARINIA FRENATA.

*Nectarinia frenata*, Müll. Verh. Zool. p. 61, pl. 8. fig. 1.

*Nectarinia flavigastra*, Gould, P. Z. S. 1843, p. 104; Zool. Sulph. p. 43, pl. 24 (♀).

*Nectarinia australis*, Gould, B. Austr. Suppl. pl. 45.

Mr. Brown sends me from New Ireland an adult male and female of this species. This is very interesting; for the female of the New-Ireland bird was described and figured by Mr. Gould in 1844, under the title of *Nectarinia flavigastra*. There can be no doubt, Capt. Shelley tells me, of the identity of the New-Ireland bird with *N. frenata*, which has the following wide range—Celebes, Moluccas, New Guinea, New Ireland, islands of Torres Straits and North-eastern Australia. This bird will be figured in Capt. Shelley's 'Monograph of the Cinnnyridæ,' part 3.

17. PHILEMON COCKERELLI, sp. nov.

*Supra fuscus unicolor, pileo et capitis lateribus paulo obscurioribus: subtus dilutior, fusco-cinereus, gutture albicantiore et striis angustis plumarum scapas occupantibus instructo: fronte, loris, oculorum ambitu et mandibula inferiore usque ad aures denudatis: plumis auricularibus dorso concoloribus: rostri tuberculo nullo: rostro obscure corneo, pedibus albicanti-plumbeis: long. tota 13·0, alæ 6·0, caudæ 5·0, tarsi 1·7.*

*Hab.* New Britain (Feb. 1876).

*Obs.* Similis *P. moluccensi*, sed pileo obscuriore, dorso omnino concolori dignoscendus; a *P. fuscicapillo* colore corporis inferioris dilutiore diversus.

I have already pointed out (P. Z. S. 1869, p. 120) the necessity of using *Philemon* as the name of this genus.

18. CALORNIS NITIDA.

*Calornis nitida*, G. R. Gray, P. Z. S. 1858, p. 181.

*Lamprotornis metallicus*, Garn. Voy. de la Coq. Zool. i. p. 343.

*Calornis metallica*, Scl. P. Z. S. 1869, p. 120.

A pair of this species from Duke-of-York Island. The male agrees with Mr. Gray's type, collected during the voyage of the 'Sulphur' in New Ireland. Whether it be really separable from *C. metallica*, I must leave the monographer to decide.

19. GRACULA KREFFTI.

*Gracula krefftii*, Scl. P. Z. S. 1869, p. 120, pl. ix.

*Gracula gnathoptila*, Cab. et Reich. Journ. f. Orn. 1876, p. 322.

My original example of this species having been received in spirit, the yellow colour of the belly was much faded, and the absence of the naked jaw-stripe (which occurs in *G. dumonti*) was not noted.

Both these characters are well developed in the present example from New Ireland; and I have no doubt that the New-Hanover bird, which has been recently termed *G. gnathoptila*, is of the same species.

20. CORVUS, sp. inc.

A single skin of a Crow from New Britain, which Mr. Sharpe,



now engaged on the genus, is inclined to refer to *C. enca*<sup>1</sup>, but Prof. Salvadori to a smaller form of *C. orru*. If the former view be correct, this would be again a reappearance of a Celebesian form.

21. DENDROCHELIDON MYSTACEA.

*Cypselus mystaceus*, Less. Voy. Coq. Zool. i. p. 647, Atl. t. 22.

*Dendrochelidon mystaceus*, Gould, B. Asia, pt. xi.

One male specimen, without exact locality.

22. ALCEDO MOLUCCENSIS, Blyth; Sharpe, Kingf. p. 21, pl. 4.

*Alcedo ispida*, var. *moluccana*, Less. Voy. Coq. Zool. i. p. 343.

One skin, without exact locality; but Lesson obtained the species in New Ireland.

23. CEYX SOLITARIA, Temm.; Sharpe, Kingf. p. 115, pl. 38.

One skin, without exact locality.

24. HALCYON ALBICILLA (Dumont); Sharpe, Kingf. p. 197, pl. 73.

One skin, without exact locality.

25. HALCYON CHLORIS (Bodd.); Sharpe, Kingf. p. 229, pl. 87.

One skin, without exact locality.

26. HALCYON SANCTUS, Vig. et Horsf.; Sharpe, Kingf. p. 239 pl. 91.

One skin, from Duke-of-York Island, Oct. 1875.

27. TANYSIPTERA NIGRICEPS, sp. nov.

*Supra nigra, plaga interscapulari magna et uropygio albis: alis nigris extus cæruleis: caudæ rectricibus lateralibus nigris cæruleo marginatis, medianis elongatis albis in margine externo limbo cæruleo ornatis, duabus quoque proximis in margine interno albis: subtus omnino cinnamomea unicolor: rostro coccineo; pedibus fuscis: long. tota 11·5, alæ 3·6, caudæ rectr. med. 6·8, ext. 2·1.*

*Hab.* Duke of York Island (Oct. 1875).

*Obs.* Species distinctissima, *T. sylvicæ* proxima, sed pileo nigro insignis.

28. MEROPS ORNATUS, Lath.; Gould, B. Austr. ii. pl. 16.

A young bird of this Bee-eater from Duke-of-York Island. I have also a skin from New Britain, obtained from Mr. Kreffit in 1869 along with the birds from the Solomon Islands.

<sup>1</sup> Mr. Sharpe writes: "Your Crow is nearest to *C. enca*. There are three races of this form:—

"1. *C. enca*: wing 10·8–12·5, tarsus 1·9–2·1.

"2. *C. orru*: wing 12·5–13·1, tarsus 2·15–2·3.

"3. *C. violaceus*: wing 9·5–9·8, tarsus 1·65–1·75.

"Your bird measures 11·45, tarsus 1·9. It indicates a Celebesian affinity again."

## 29. EURYSTOMUS CRASSIROSTRIS, Sclater, P. Z. S. 1869, p. 121.

One skin, agreeing with the type from the Solomon Islands, is marked female, but has no exact locality indicated.

## 30. CENTROPUS ATERALBUS.

*Centropus ateralbus*, Less. Voy. Coq. Zool. i. p. 620, Atl. t. 34 ; Scl. P. Z. S. 1869, p. 122.

A skin of this Coucal is labelled "New Britain and New Ireland," the collector having, I suppose, found it in both these islands. It has the whole head white, except a few frontal feathers, and a white patch on each flank. But I am not disposed to regard the differences from Lesson's figure as more than individual.

## 31. CENTROPUS VIOLACEUS.

*Centropus violaceus*, Quoy & Gaim. Voy. de l'Astrol. Zool. i. p. 229, t. 19.

One skin of this fine species, from New Britain, marked "male." Quoy and Gaimard obtained it in New Ireland. The total length of the present specimen is about 25·0 in., wing 9·5, tail 14·0. The bill is black, the feet apparently whitish or pale yellow. Dr. Meyer's *Nesocentor violaceus*<sup>1</sup>, from Mysore, has been recently separated by Salvadori as *N. chalybeus* (Ann. Mus. Gen. vii. p. 915).

## 32. CACOMANTIS INSUPERATUS.

*Cuculus insperatus*, Gould, P. Z. S. 1845, p. 19, et B. Austr. iv. pl. 87.

*Cuculus assimilis*, Gray, P. Z. S. 1858, p. 184 (?).

*Cacomantis insperatus*, Gould, Hand-b. B. Austr. i. p. 619.

*Cuculus dumetorum*, Gould, P. Z. S. 1845, p. 19 (?).

One example from Duke-of-York Island, one from New Britain, and a third with locality not marked. These skins seem to agree sufficiently with Gould's figure.

I have compared them with three Australian skins in the collection of Mr. Godman, obtained from Cockerell; and I consider them referable to the same species. Two of Mr. Godman's skins are marked "*C. dumetorum*," and a third (younger) bird "*C. insperatus*."

## 33. EUDYNAMIS PICATUS.

*Cuculus rufiventer*, Less. Voy. Coq. Zool. i. p. 622.

*Eudynamis rufiventer*, Walden, Ibis, 1869, p. 344.

*Eudynamis picatus*, Müll. Verh. Ethn. p. 176 ; Cab. et Heine, Mus. Hein. ii. p. 55.

A pair of the Black *Eudynamis*, which must, I suppose, be referred to this form of *E. orientalis*. They measure :—♂, total length 17 inches, wing 8·1, tail 8·8 ; ♀, total length 15·5 inches, wing 8, tail 8.

The *exact* locality is not given.

## 34. ECLECTUS POLYCHLORUS (Scop.).

From Duke-of-York Island Mr. Brown sends two skins of what,

<sup>1</sup> Mitth. zool. Mus. Dresden, pt. i. p. 16 (1875).

according to recent discoveries<sup>1</sup>, must, I suppose, be regarded as a pair of this species. But it is only right to say that Mr. Brown does not share in the view that *E. linnæi* is the female of *E. polychlorus*. He writes:—"By the by, I hear that many naturalists maintain that the Green Parrot (see specimens) is the adult male, and the red one the female or young bird of the same species. This is a gross error. Our attention was directed to this, and I am quite sure that they are two different birds. We shot the green ones, both male and female."

### 35. GEOFFROIUS CYANICEPS.

*Piones heteroclitus* ♀, Hombr. et Jacq. Voy. au P. S. Atl. t. 25 bis, fig. 2.

*Pionus cyaniceps*, Puch. ibid. Zool. iii. p. 105.

*Geoffroius heteroclitus*, Scl. P. Z. S. 1869, p. 122.

A skin from New Britain (Feb. 1876) agrees sufficiently with the two specimens from the Solomon Islands which I have referred to the female of this species on Dr. Finsch's authority. But I am now rather of opinion that Dr. Pucheran was probably correct in considering the so-called female of Hombron and Jacquinet a distinct species.

My specimens have no yellow at all on the cheeks; but the whole head is pale brown, with a cyaneous tinge.

### 36. LORICULUS TENER, sp. nov.

Fem. *Clare viridis fere unicolor, uropygio et caudæ tetricibus superioribus flavicantibus: macula gutturali rubra: remigibus et rectricibus nigris, extus dorso concoloribus, in pagina inferiore læte cæruleis: rectricum ipsis apicibus flavicantibus: rostro nigro: pedibus fuscis: long. tot. 3·8, alæ 2·7, caudæ 1·2.*

*Hab.* Duke-of-York Island (Nov. 1875).

Unfortunately there is only a single example of this diminutive *Loriculus* in the collection. It would seem to be nearest to *L. aurantiifrons* of Schlegel (Ned. Tijdschr. iv. p. 9), but has not the red rump, which, so far as I can tell from Schlegel's description, is present in both sexes of that species<sup>2</sup>.

Salvadori (Ann. Mus. Civ. Gen. vii. p. 912) and Meyer (Sitzungsb. Isis, 1875, p. 78) both record the occurrence of *L. aurantiifrons* in New Guinea, it having been originally described from Mysol. It is the only species of the genus yet known to be found there.

### 37. CACATUA OPHTHALMICA.

*Cacatua ducorpsi*, Scl. P. Z. S. 1862, p. 141, pl. xiv. (err.).

*Cacatua ophthalmica*, Scl. P. Z. S. 1864, p. 188.

*Pictolophus ophthalmicus*, Finsch, Papag. i. p. 282.

<sup>1</sup> Cf. Salvadori, Ann. Mus. Genova, vii. p. 756.

<sup>2</sup> P.S. (March 26th).—Dr. Salvadori has now most kindly lent me a female of *L. aurantiifrons* from Andai, New Guinea, for comparison. It has the rump and upper tail-coverts scarlet instead of yellow, and is not generally of so bright a green as my bird, which is otherwise very similar in size and colour.—P. L. S.

A single skin of this Cockatoo has no exact locality affixed to it. It measures—whole length 17·5 inches, wing 11·5, tail 6·8.

38. *NASITERNA PUSIO*.

*Nasiterna pusio*, Scl. P. Z. S. 1865, p. 620, pl. xxxv.

The single skin of this species agrees well with the typical specimen, which I presented to the British Museum after describing it. The exact locality is not marked.

39. *LORIUS HYPÆNOCHROUS*.

*Lorius hypoinochrous*, Gray, List of Psitt. p. 49 (1859).

*Lorius hypænochrous*, Scl. P. Z. S. 1869, p. 123, et 1876, p. 460.

One skin, marked "New Britain and New Ireland," meaning, I suppose, that it occurs in both localities.

40. *TRICHOGLOSSUS MASSENÆ*, Bp.

Dr. Cabanis (Journ. f. Orn. 1876, p. 324) has lately separated an allied species from New Hanover as *T. flavicans*; but Mr. Brown's single skin appears to me to belong to the true *T. massenæ*. Its exact locality is not stated.

41. *TRICHOGLOSSUS SUBPLACENS*, Sclater, P. Z. S. 1876, p. 519.

*Psitteuteles subplacens*, Salvad. Ann. Mus. Civ. Gen. ix. p. 10.

From Duke-of-York Island we have a pair of this recently described species. The female corresponds exactly with the same sex in *T. placens*, but, like the male, has the rump entirely green, like the back.

D'Albertis procured only a single male of this Parrot in S.E. New Guinea, opposite Yule Island.

42. *NINOX ODIOSA*, sp. nov.

*Supra murino-brunnea, plumis capitis et cervicis usque ad dorsum medium albo guttatis: superciliis in fronte conjunctis albis: alis extus maculis rotundis albis in plumarum marginibus externis ornatis; remigibus intus ad basin albis: subtus albus, pectore dorso concolori, albo guttato et transfasciato, ventre et hypochondriis striis paucis fuscis ornato: rostro flavo, pedibus fuscis: tarsis totis plumosis, digitis setosis: long. tota corp. 7·0, alæ 5·8.*

*Hab.* New Britain (Feb. 1876).

There is but one specimen of this Owl in the collection; and that is, unfortunately, imperfect, the tail being absent, and the wings having been partly cut. There is, however, sufficient evidence that it belongs to a species of *Ninox*, not hitherto recognized, allied to *N. punctulata*<sup>1</sup> of Celebes, but distinguished by the larger and more distinct spots above, and the flammulated belly.

43. *PANDION HALIAËTUS*.

A skin of this universally distributed species.

<sup>1</sup> *Noctua punctulata*, Quoy et Gaim. Voy. Astr. Zool. i. p. 165.

44. *HALIASTUR GIRRENERA* (Vieill.) ; Sharpe, Cat. i. p. 315.

One adult example. Locality not given.

45. *ACCIPITER ETORQUES*.

*Urospizias etorques*, Salvad. Ann. Mus. Civ. Gen. vii. p. 901.

An adult, and a young specimen, apparently of this new species, lately described by Salvadori from New Guinea and Salawatty, are in the collection, but without exact locality.

The only divergence I note from Salvadori's description of the adult is, that in my specimen the tail-feathers (partly in moult) are of a nearly uniform plumbeous, with but *very faint* indications of any cross markings.

46. *BAZA REINWARDTI* (Müll. et Schleg.).

A single skin of this species, exact locality not marked, nearly agrees with some specimens in the British Museum.

47. *CARPOPHAGA RUBRICERA*.

*Columba pinon*, Less. Zool. Voy. Coq. i. p. 343 (err.) ?

*Globicera rubricera*, Bp. C. R. xxxix. p. 1073, et Cons. ii. p. 31 (1854), et Ic. d. Pig. t. xxxix.

*Carpophaga rubracera*, Gray, List of Col. in B. M. p. 18.

*Carpophaga lepida*, Cass. Pr. Ac. Sc. Phil. vii. p. 230 (1854).

One skin of this fine species, without exact locality. The original type of Bonaparte, however, is from New Ireland; and a second established *patria* is San Christoval, Solomon Islands (*MacGillivray* in Brit. Mus.).

48. *CARPOPHAGA VAN-WYCKI*.

*Carpophaga van-wyckii*, Cassin, Pr. Ac. Sc. Phil. xiv. p. 320 (1862).

One skin of this rare and little-known species from Duke-of-York Island. The original specimen, described by Cassin, was obtained in New Ireland, during the voyage of the U.S. North Pacific Exploring Expedition, under the command of Captain Rodgers. So far as I know, there are no examples of this Fruit-pigeon in any European collection.

49. *CARPOPHAGA SPILORRHOA*.

*Carpophaga luctuosa*, Gould, B. Austr. v. pl. 60.

*Carpophaga spilorrhoea*, Gray, P. Z. S. 1858, p. 186.

One skin of this species.

50. *PTILOPUS SUPERBUS*, Gould, B. Austr. v. pl. 57.

One male of this widely spread species.

51. *PTILOPUS RIVOLII*.

*Columba rivolii*, Knip et Prev. Fig. ii. pl. 57; Des Murs, Icon. Orn. pl. 4.

*Ptilonopus rivolii*, Gray, List of Col. in B. M. p. 6.

A pair of this bird, the male of which agrees in every respect with the figures and descriptions above quoted. We have thus a better indication of the true *patria* of this fine Fruit-pigeon than has yet been obtained.

*Pt. strophium*, Gould, from the Louisiade archipelago, is, I believe, a different species, not having the purple patch in the middle of the belly.

The female of the present bird is of a nearly uniform green, with the lower belly and crissum yellow.

## 52. *ÆDIRHINUS INSOLITUS*.

*Ptilopus insolitus*, Schlegel, Ned. Tijdschr. i. p. 61. pl. iii. fig. 3.

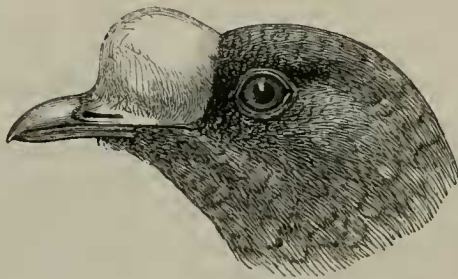
*Ptilopus humeralis jobiensis* (monstr. ?), Schlegel, Mus. P.-B. Columbæ, p. 16.

*Ædirhinus globifer*, Cab. et Reich. Journ. f. Orn. 1876, p. 326.

One example of this remarkable Pigeon, from Duke-of-York Island, obtained in October 1875. Schlegel originally described his specimen, with which mine appears to agree in all essential particulars, as from "New Caledonia," but subsequently came to the strange conclusion that it was only a monstrous variety of *Ptilopus jobiensis*!

There can be, to my mind, no doubt of the validity of the species, which I agree with Hrn. Cabanis and Reichenow should even con-

Fig. 2.



Head of *Ædirhinus insolitus*.

stitute the type of a new genus, readily recognizable by the hard bony protuberance on its forehead.

Dr. Huesker obtained the specimen described by the last-named author in New Ireland, during the voyage of the 'Gazelle.'

## 53. *MACROPYGIA BROWNI*, sp. nov.

*Alba*: alis caudaque cum dorso toto schistaceo-nigris: pileo postico, hypochondriis, ventre imo et crisso pallide cineracescentibus: rostro basali coccineo, apicali flavo: pedibus rubris: long. tota 18·0, alæ 8·8. caudæ rectr. ext. 4·0, med. 9·0.

*Hab.* Duke-of-York Island.

*Obs.* Species forma *M. reinwardti* omnino similis, dorso caudaque schistaceis nec castaneis diversa.

A single skin of this remarkable Pigeon is in the collection. It appears to be in every respect a close ally of *M. reinwardti*, which has a wide range over New Guinea and the Moluccas. My specimen is marked "male, legs red," and is obviously adult. Dr. Salvadori kindly tells me that he has seen several young specimens of *M. reinwardti* with the back and wings blackish; but I cannot believe that the present example is otherwise than mature.

54. *MACROPYGIA CARTERETIA*, Bp. Consp. ii. p. 57.

Under this name I place two examples, adult and young, from Duke-of-York Island, of a representative of the wide-ranging form which Schlegel (*Mus. P.-B. Col.* p. 110) calls *M. turtur*, but for which the oldest name, if all the forms are to be referred to one species, is *amboinensis* (Linn.).

Bonaparte's description of his *M. carteretia* from New Ireland is evidently that of a young bird, and, so far as it goes, suits my young specimen pretty fairly.

55. *MACROPYGIA NIGRIROSTRIS*, Salvad. Ann. Mus. Civ. Gen. vii. p. 972.

An adult bird from New Ireland (Nov. 1875) and a young bird from Duke-of-York Island (Oct. 1875) seem to be referable to this recently described species, which is one of the recent discoveries on Mount Arfak.

The young bird has the head, neck, and breast of a much brighter colour, and freckled with transverse black markings, except on the throat.

The measurements, which are as follows, seem to be slightly inferior to those given by Count Salvadori.

		Long tota.	alæ.	caudæ.
		in.	in.	in.
Adult.	New Ireland . . . . .	11·7	5·7	6·2
Young.	Duke-of-York Island . . . . .	12·5	5·65	6·2

56. *CHALCOPHAPS STEPHANI*.

*Peristère d'Etienne*, Hombr. et Jacq. Voy. au Pôle Sud, t. 28. fig. 2.

*Chalcophaps stephani*, Puch. Zool. Voy. au P. S. iii. p. 119.

A pair of this species, with the exact locality not given. In the female the forehead is grey instead of white, and there is no purplish colour on the head and nape.

For the range of this species cf. Salvad. Ann. Mus. Civ. Gen. ix. p. 206.

57. *PHLOGÆNAS MARGARITÆ*.

*Chalcophaps margaritæ*, D'Alb. et Salvad. Ann. Mus. Civ. Gen. vii. p. 836.

*Phlogœnas margaritæ*, Salvad. op. cit. viii. p. 405.

*Chalcophaps margaritæ*, Salvad. op. cit. ix. p. 44.

*Phlogœnas jobiensis*, Meyer, Mitth. zool. Mus. Dresden, i. p. 10 (1875).

Of this beautiful Pigeon there are a pair and a young bird in the collection, without the exact locality.

Now that Salvadori has received the adult of this species from Jobie, I think there can be no doubt that Meyer's *Phlogœnas jobiensis* is merely the young of this bird. I have compared Dr. Meyer's type (now in Mr. Gould's hands on loan) with my young bird, and find them agree in every essential, though Dr. Meyer's specimen shows some traces of the purple colour of the adult appearing on the wing-coverts, which is not the case with my specimen.

It is worthy of notice how nearly allied this species is to *P. erythroptera*, of the Society group, which, however, differs in its rather smaller size and white forehead.

#### 58. PHLOGÆNAS JOHANNÆ, sp. nov. (Plate XVI.)

*Fuscescenti-castanea, in dorso æneo lavata: tectricibus alarum minoribus extus nitide purpureis: capite et cervice undique cum pectore pallide cinereis, hoc colore in pileo saturatiore, in pectore clariore et in album purum transeunte: occipite, sicut dorsum, æneo lavato: colore pectoris albo in semicirculum desinente, et margine purpureo sicut in alarum tectricibus præincto: alarum remigibus primariis fusco-nigris unicoloribus, secundariis et scapularibus extus dorso concoloribus: cauda supra dorso concolori, subtus nigricante, rectricum apicibus fusco-rufis: rostro nigro: oculorum ambitu nudo: pedibus rubris: long. tota 7·8, alæ 4·4, caudæ 2·7, tarsi 1·1.*

A pair of this beautiful Ground-dove, which, so far as I can make out, is quite new, are in the collection; the exact locality is unfortunately not given.

The nearest species known seem to be *P. stairi* (G. R. Gray)<sup>1</sup>, of the Samoans, from which, however, *P. johannæ* may be readily known by its lovely pure white breast, and *P. canifrons*, Hartl. & Finsch, of the Pelew group<sup>2</sup>, in which the hind part of the neck is rusty red.

#### 59. CALÆNAS NICOBARICA (Linn.).

One female, from Duke-of-York Island. Lesson (Voy. Coq. Zool. i. p. 342) has already recorded the occurrence of this species in New Ireland.

#### 60. ARDEA SACRA, Gm.: Finsch et Hartl. Orn. Central-Pol. p. 201.

One skin in the grey, and one in the white plumage, from Duke-of-York Island.

<sup>1</sup> P. Z. S. 1856, p. 7, pl. 115.

<sup>2</sup> Journ. Mus. Godeffr. viii. p. 27, pl. v. fig. 1.



## 61. ARDEA FLAVICOLLIS, Lath.

*Ardetta flavicollis*, Gould, B. Austr. vi. pl. 65.

One skin either of the true *A. flavicollis*, or of its Australian representative *A. gouldi*, Bp. (if these are really distinguishable).

## 62. MEGAPODIUS HUESKERI, Cab. et Reichenow.

Messrs. Cabanis and Reichenow (J. f. O. 1876, p. 326) describe the Megapode of New Hanover as *M. hueskeri*; and I suppose the single skin sent by Mr. Brown to be of the same species. But Prof. Salvadori tells me that he finds it very difficult to distinguish *M. hueskeri* from *M. forsteni* of the island of Bouru.

## 63. RALLINA TRICOLOR, G. R. Gray, P. Z. S. 1858, p. 188; Gould, B. Austr. Suppl. pl. 78.

One skin of this species, which extends over New Guinea, the Aru Islands, and Cape York.

The collection also contains single skins of the following well-known species:—

## 64. CHARADRIUS FULVUS (Gm.), from Duke-of-York Island.

## 65. CHARADRIUS MONGOLICUS, Pall.

## 66. NUMENIUS UROPYGIALIS, Gould.

## 67. TOTANUS INCANUS (Gm.), from Duke-of-York Island.

## 68. TRINGOIDES HYPOLEUCUS (Linn.), from Duke-of-York Island.

## 69. STERNA FULIGINOSA (Gm.).

## 70. ANOUS STOLIDUS (Linn.), from New Ireland.

Having now passed in review the seventy species in Mr. Brown's collection, let us, before making any general remarks on it, consider what was already known of the *ornis* of these islands. Duke-of-York Island and New Britain may be dismissed in a few words, no previous naturalist having, so far as I am aware, made any investigation of the faunas, although a few chance specimens may have been procured from them<sup>1</sup>. But New Ireland has been more favoured. In 1823 it was visited by the French naturalist, Lesson, during the celebrated voyage of the 'Coquille,' which added so much to our knowledge of the fauna of the Eastern Islands. The 'Coquille' remained from the 12th to the 21st of August of that year at Port Praslin, near the extreme south of New Ireland<sup>2</sup>. In July 1827

<sup>1</sup> New Britain is the undoubted *patria* of *Casuarius bennettii*, of which the first (living) example was received by the Society in 1857.

<sup>2</sup> Cf. Zool. Voy. Coquille, i. p. 329 *et seq.*

another French discovery-vessel, the 'Astrolabe,' passed several days in the adjoining port Havre Carteret; and Messrs. Quoy and Gaimard, the naturalists on board, though embarrassed by bad weather, made several additions to Lesson's ornithological discoveries. In the summer of 1841, Havre Carteret was again visited by the English vessel H.M.S. 'Sulphur' (under the command of Sir E. Belcher). Surgeon Hinds certainly made a collection of birds on the occasion, although Mr. Sharpe informs me that only three specimens are registered in the British Museum as having been obtained in New Ireland from the voyage of the 'Sulphur.'

From these sources we were acquainted, previously to the arrival of the present collection, with the existence of some 25 birds in New Ireland<sup>1</sup>. Mr. Brown has added at least six or seven species to the list; and it is only from the defective labelling of his specimens, as I believe, that we have not obtained from him a much more complete insight into the character of its *ornis*.

Enough, however, is now known to show that New Ireland must be referred decidedly to the Papuan Subregion<sup>2</sup> of the Australian avifauna. The presence of such forms as *Gracula*, *Eclectus*, *Nasiterna*, *Lorius*, and *Calcnas* is quite sufficient to prove that it belongs strictly to the northern section of the Australian Region, rather than to Australia itself; and there can be little doubt that New Britain, New Hanover, and the whole of the Solomon groups belong strictly to the same subregion. Let us hope that Mr. Brown may be induced to continue his collections, and to give us further opportunities of continuing these interesting investigations,

## 2. On a Collection of Chiroptera from Duke-of-York Island and the adjacent parts of New Ireland and New Britain. By G. E. DOBSON, M.A., M.B., F.L.S., &c.

[Received February 2, 1877.]

(Plate XVII.)

Mr. P. L. Selater, Secretary of the Society, has most kindly placed in my hands for examination an exceedingly interesting collection of Chiroptera from Duke-of-York Island and adjacent coasts of New Ireland and New Britain, forwarded to him by the Rev. George Brown, C.M.Z.S.

Although the collection consists of seventeen specimens only, twelve distinct species are represented, of which four are undescribed, one is the type of a new genus and species, and ten are new to the fauna of these little-known islands.

<sup>1</sup> I had intended to have given a complete list of the known birds of New Ireland as an appendix to the present paper, but, not having had time to complete it satisfactorily, must reserve it for a future communication.

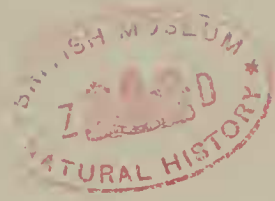
<sup>2</sup> For general remarks on the division of the Australian Region into subregions, see P. Z. S. 1869, p. 125.



W. Smith

M & N. Hanhart imp

MELONYCTERIS MELANOPS.



## Suborder MEGACHIROPTERA.

## Family PTEROPIDÆ.

## Group I. PTEROPI.

## PTEROPUS MELANOPOGON.

*Pteropus phaiops*, Temm. Monogr. Mammal. ii. p. 65 (1835-41).

*Pteropus melanopogon*, Schlegel; Peters, Monatsber. Akad. Berl. 1867, p. 330.

*Pteropus melanopogon*, var. *neohibernicus*, Peters, l. c. 1876, p. 317.

Although the single specimen in the collection is larger and has considerably shorter ears than those described under the above name by Dr. Peters, I have no hesitation in referring it to the same species, as it agrees in all other respects with them and comes from the same locality. In size and in the shortness of the ears it agrees more closely with *Pt. degener*, Peters, from the Aru Islands, but differs from that species in the much wider space occupied by the hair of the back, which is more than an inch in breadth across the loins. But in *Pt. melanopogon* the width of the space occupied by the fur of the back diminishes as the animal increases in age; and the length of the ears is not only slightly variable in different individuals of every species of the genus, but is often very considerably lessened by a peculiar ulcerative process which attacks the margins of the ears. I believe therefore that *Pt. degener*, Peters, has been founded on a fully grown or even aged individual of *Pt. melanopogon*, that *Pt. melanopogon*, var. *neohibernicus*, has been described from young individuals, and that the specimen in this collection is intermediate in age between the two. In the following table the relative measurements of these specimens are given for the purpose of comparison.

	Length of head.	ear.	forearm.	second finger.	fourth finger.	tibia.	calcaneum.	foot and claws.	Sex.
<i>Pt. degener</i> , Peters. Aru Islands .....	in. 3·8	in. 0·88	in. 7·7	in. ...	in. ...	in. 3·4	in. 1·08	in. 2·4	♂
<i>Pt. melanopogon</i> , Dobson. New Ireland.....	3·7	0·9	7·0	14·0	9·4	3·3	1·1	2·4	♂
<i>Pt. melanopogon</i> , var. <i>neohibernicus</i> , Peters. New Ireland.	...	1·1	5·0	...	...	...	...	...	♀

The fur in our specimen is dark reddish brown on the face, between the eyes, and under the jaws; head, neck, shoulders, and the

whole under surface of the body bright reddish brown, the hairs paler and more yellowish towards the base; on the back dark brown, intermixed with bright sulphur-yellow, which replaces the brown across the loins; interfemoral membrane with longer, dark brown, almost black hairs.

*PTEROPUS CAPISTRATUS.*

*Pteropus capistratus*, Peters, Monatsber. Akad. Berl. 1876, p. 316, pl.

A single specimen of an adult female of this remarkable species agreeing in all respects with the original description. The single central longitudinal black line dividing the forehead, with a similar dark-coloured streak across the face on each side between the eye and the angle of the mouth, as well as its considerably larger size, at once distinguish this species from *Pt. personatus*, to which it is in all other respects very closely allied.

*CYNOXYCTERIS BRACHYOTIS*, sp. nov.

Resembles *C. minor*, Dobson, in size and in the nakedness of the extremities, but may be at once distinguished by the much shorter ears, longer muzzle, and deciduous first upper premolars.

Ears short, oval, rounded off above; a prominent thickened lobule at the base of the outer margin of the ear-conch; muzzle long and narrow, nostrils and upper lip as in *C. amplexicaudata*.

Fur short, dark brown above, with greyish tips; beneath light greyish brown. On the upper surface the back of the neck and shoulders (in an adult female) is very thinly covered, almost naked, and the fur of the body scarcely extends upon the membranes; the tibiæ and feet and adjacent interfemoral membrane are naked; beneath, a broad band of fur extends outwards behind the elbow and forearm, lessening in width towards the carpus.

First upper premolar very small in immature individuals, deciduous in adults; remaining teeth as in *C. amplexicaudata*.

In the following Table the relative measurements of this species and of *C. minor*, Dobson, are given.

	Length of head.	eye from nose.	ear.	forearm.	thumb.	second finger.	fourth finger.	tibia.	foot and claws.
<i>C. brachyotis</i> .....	1.5	0.55	0.55	2.85	0.9	4.5	3.4	1.15	0.7
<i>C. minor</i> .....	1.55	0.45	0.68	2.8	0.9	4.4	3.3	1.05	0.75

The collection contains two specimens—a perfectly adult female, from which the above specimens were taken, and an immature female.

Fig. 1.

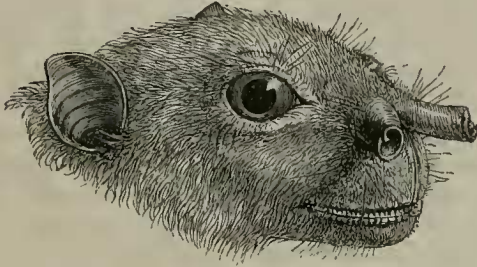


Fig. 2<sup>1</sup>.

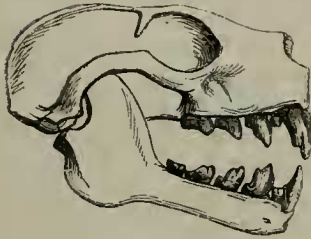


Fig. 2a.

Fig. 3.



Fig. 3a.

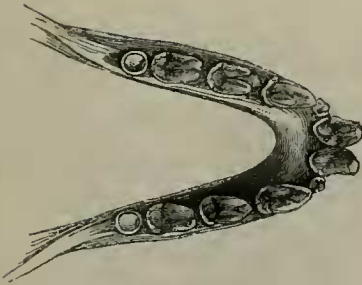


Fig. 1. Head of *Harpyia major*.

Figs. 2 and 2a. Skull and lower jaw of *Harpyia major*.

Figs. 3 and 3a. Skull and lower jaw of *H. cephalotes*.

#### HARPYIA MAJOR, sp. nov.

Much larger than *H. cephalotes*, Pallas, but with shorter ears, longer nasal tubes, and much paler-coloured fur, differing also in the form of the skull and of some of the teeth.

Fur above pale buff, the base of the hairs on the back dark; ex-

<sup>1</sup> The back of the skull is imperfect in the specimen from which this figure was drawn.

tremities of the hairs on the head and about the ears yellow; on the back the greater part pale buff; a dark vertebral line, as in *H. cephalotes*, extends from a point between the shoulders to the tail; beneath dull yellowish buff throughout.

Upper canine on each side with a prominent external cusp; last lower molar with a circular crown. In *H. cephalotes* the upper canine has a blunt ill-defined external projection, and the crown of the last lower molar is oval or quadrilateral. The skull in this species is also very much larger and differently shaped. The frontal bone is deeply grooved between the postorbital processes; and the nasal bones terminate at such a height above the præmaxilla as to be on the same level with the floor of the groove behind them; the zygomatic arch is more than twice as thick as in *H. cephalotes*; and the postorbital processes of the frontal are longer.

The following Table exhibits the measurements of the type of this species, of another, immature specimen with the epiphyses of the finger-bones unconsolidated, and of a perfectly adult specimen of *H. cephalotes* from Timor.

	Length of head.	ear.	forearm.	thumb.	first finger.	second finger (metacarp.).	second finger (1st phal.).	second finger (2nd phal.).	fourth finger (metacarp.).	fourth finger (1st phal.).	fourth finger (2nd phal.).	tibia.	foot and claws.
<i>H. major</i> .....	1.55	0.55	3.1	1.3	2.2	2.15	1.65	2.3	2.0	1.0	1.2	1.2	0.7
„ (immature).	1.5	0.55	2.95	1.3	2.0	1.9	1.55	2.1	1.85	0.95	1.05	1.1	0.7
<i>H. cephalotes</i> .....	1.3	0.6	2.4 <sup>1</sup>	0.9	1.6	1.6	1.25	1.7	1.6	0.75	0.85	0.85	0.5

#### CEPHALOTES PERONII.

*Cephalotes peronii*, Geoffroy, Ann. du Mus. xv. p. 104 (1810); Temminck, Monogr. Mammal. ii. p. 106.

*Hypoderma peronii*, Is. Geoffroy, Dict. Classiq. xiv. p. 708.

The collection contains two specimens of this species—an immature female, and a young male with milk-dentition. In the latter there are four upper incisors and two lower.

#### Group II. MACROGLOSSI.

##### MACROGLOSSUS MINIMUS.

*Pteropus minimus*, Geoffroy, Ann. du Mus. xv. p. 97 (1810).

*Pteropus rostratus*, Horsfield, Zoolog. Researches in Java (1825).

<sup>1</sup> I have found this to be the constant length of the forearm of all perfectly adult specimens of *H. cephalotes* from the Malay archipelago.



*Macroglossus minimus*, Temminck, Monogr. Mammal. i. p. 191 (1827); Dobson, Monogr. Asiat. Chiropt. p. 34 (1876).

Two specimens of this widely distributed species, differing in no respect except in their slightly smaller size from individuals inhabiting the peninsula of India and Java, and probably identical with the small variety from Australia to which Dr. Peters has given the name *M. australis*.

*MELONYCTERIS*<sup>1</sup>, gen. nov.

Muzzle long, narrow, cylindrical; nostrils projecting slightly; upper lip with a vertical groove, bounded laterally by naked raised edges as in *Pteropus* and *Cynopterus*; index finger with a distinct claw; metacarpal bone of middle finger as long as the index finger; wing-membrane from the sides of the body and from the dorsal surface of the base of the middle toe; tail none, or very short.

*Dentition.*—Inc.  $\frac{4}{2-2}$ ; C.  $\frac{1-1}{1-1}$ ; Pm.  $\frac{3-3}{3-3}$ ; M.  $\frac{2-2}{3-3}$ .

First upper and lower premolars very small, close to the base of the canines; molars close together, very narrow, scarcely elevated above the gum.

Tongue very long and narrow, as in *Macroglossus*.

This genus is most closely related to *Macroglossus*, with which it agrees in the general form of the skull and in the mode of attachment of the wing-membrane to the sides of the body, but is distinguished by the very different position and size of the first premolars, by the origin of the wing-membrane from the middle toe instead of from the base of the fourth, and by the form of the extremity of the muzzle.

Fig. 4.

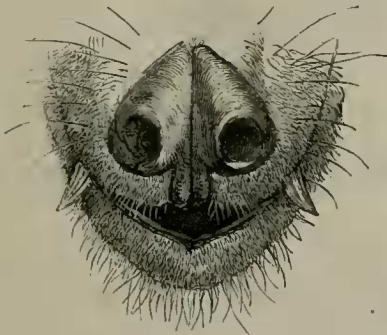
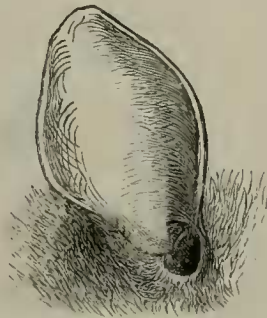


Fig. 5.



Front of muzzle and ear of *M. melanops*.

*MELONYCTERIS MELANOPS*, sp. nov. (Plate XVII.)

Slightly smaller than *Eonycteris spelæa*, Dobson, which it resembles closely in the external form of the muzzle; nostrils as in *Cynonycteris amplexicaudata*, but scarcely so prominent, separated by a deep groove which passes down to the upper lip, where it becomes

<sup>1</sup>  $\mu\eta\lambda\omicron\nu$ , tree-fruit;  $\nu\kappa\tau\epsilon\rho\iota\varsigma$ , a bat.

narrower and is margined as in *Cynopterus* by raised naked edges (fig. 4); tongue very long, much attenuated in terminal fourth, armed with recurved, brush-like papillæ; ears about as long as the muzzle, oval, rounded off above, the outer and inner margins of the ear-conch equally convex, so that the ear attains its greatest width in the middle (fig. 5).

Interfemoral membrane very short behind; no trace of a tail in either of the specimens. Wing-membrane from the base of the middle toe, or from the space between the second and middle toe, and from the sides of the body. Fur moderately short, but very dense, extending thickly upon the wing-membrane as far outwards as a line drawn from the elbow to the knee, and more thinly for a considerable distance beyond, and also covering the short interfemoral membrane and the legs. Above bright reddish yellow, the base of the hairs dark; crown of the head dark brown, the extremities of the hairs greyish yellow; a large patch round each eye dark brown, almost black; anterior half of the muzzle pale buff, a narrow streak of the same colour passing backwards between the eyes; the whole under surface of the body dark brown, almost black, the extremities of the hairs greyish; the fur on the sides of the body longer, and the terminal half of the hairs brownish buff.

Upper incisors small, forming a semicircle in front, and separated from the canines by a wide space on either side; central incisors somewhat larger than the outer ones, and converging slightly; lower incisors very small, in pairs, separated by a space between; upper

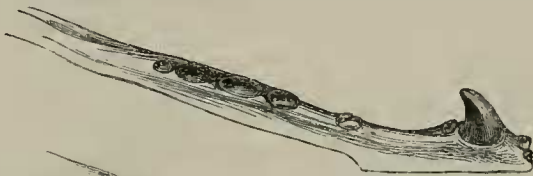


Fig. 6.



Fig. 7.

Upper and lower jaws of *M. melanops*.

canines remarkably long and strong, deeply grooved anteriorly by a longitudinal furrow: first upper premolar exceedingly small, and so close to the canine as to appear to be a small basal projection from that tooth; second premolar larger than any of the other teeth (except the canines), in the centre of the wide space between the canine and first molar; third premolar shaped like the second premolar, but much smaller and close to the first molar; molars very narrow, scarcely raised above the gum; first lower premolar larger than the

corresponding tooth in the upper jaw, but still very small, and similarly placed close to the canine, and separated from the second premolar by a wide space equal to the distance between the lower canines; second lower premolar scarcely larger than the third, and separated from it by a wide space; third premolar close to the first premolar; molars close together, very narrow, their roots and those of the other teeth in both jaws visible through the exceedingly thin translucent alveoli (figs. 6 and 7).

The molar teeth in this species appear to be proportionally smaller than in any other known species of Megachiroptera, while the canines are longer and stronger.

Length (of an adult ♂): head and body 4''·0; head 1''·4; eye from nose 0''·55; ear 0''·6; forearm 2''·4; thumb 0''·85; first finger 1''·9; second finger—metacarp. 1''·85, 1st ph. 1''·35, 2nd ph. 1''·9; fourth finger—metacarp. 1''·9, 1st. ph. 0''·8, 2nd ph. 0''·8; tibia 1''·05; calcaneum 0''·3; foot and claws 0''·7.

### Suborder MICROCHIROPTERA.

#### Family RHINOLOPHIDÆ.

##### PHYLLORHINA TRICUSPIDATA.

*Rhinolophus tricuspидatus*, Temminck, Monogr. Mammal. ii. p. 20, pl. 32. figs. 11, 12 (1835-41).

One specimen of this small species with fur bright reddish brown above and beneath. *P. tricuspидata* is probably the smallest species of Rhinolophidæ, and has hitherto been recorded from the Moluccas and Amboyna only.

##### PHYLLORHINA GALERITA.

*Hipposideros galeritus*, Cantor, Journ. Asiat. Soc. Beng. 1846, p. 183.

*Phyllorhina labuanensis*, Tomes, P. Z. S. 1858, p. 538.

*Phyllorhina longicauda*, Peters, Monatsber. Akad. Berl. 1861, p. 708.

*Phyllorhina brachyota*, Dobson, Journ. Asiat. Soc. Beng. 1874, p. 237.

*Phyllorhina galerita*, Dobson, Monogr. Asiat. Chiropt. p. 69 (1876).

The single specimen in the collection agrees with individuals of this species from the Oriental Region in having the tail almost wholly included in the interfemoral membrane, and not with the very closely allied *P. cervina* from Australia, which has the last and half the antepenultimate caudal vertebra free. It is therefore very doubtful if *P. cervina* can be considered distinct from this species.

As *P. galerita* is also found in the Peninsula of India and in Burmah, its geographical distribution is very wide, much wider than that of any other known species of Rhinolophidæ; for although *P. speoris* was described by Zelebor under the name of *P. taitiensis*, we are not absolutely certain that the specimen so named was really obtained at the island Tabiti.

## PHYLLORHINA CALCARATA, sp. nov. (Fig. 8.)

Ears as long as the head, triangular, with obtuse extremities; inner margin of the ear-conch very convex in lower half, almost straight above; outer margin slightly concave immediately beneath the tip, then straight. Nose-leaf simple in front, no secondary leaflets on the sides of the muzzle; horizontal leaf narrow, like that of *P. bicolor*; the transverse terminal leaf as in *P. larvata*, broader than the sella, with three short ill-defined vertical ridges dividing its concave front surface; a small frontal pore behind the transverse nose-leaf.

Fig. 8.

Head of *Phyllorhina calcarata*.

First phalanx of the thumb as long as the metacarpal bone. Wings from the tarsus. Calcaneum remarkably long and strong, longer than in any other known species of the genus, exceeding half the tibia in length; tail long, projecting one tenth of an inch beyond the interfemoral membrane.

Fur long and dense, above dark brown, the base of the hairs much paler, especially on the anterior half of the body; beneath, orange-brown.

Length: head and body 2''·5; tail 1''·4; head 0''·85; ear 0''·85; nose-leaf 0''·3 × 0''·22; forearm 2''·0; thumb 0''·35; second finger—metacarp. 1''·3, 1st ph. 0''·8, 2nd ph. 1''·0; fourth finger—metacarp. 1''·45, 1st ph. 0''·65, 2nd ph. 0''·55; tibia 0''·9; calcaneum 0''·6; foot and claws 0''·4.

## Family VESPERTILIONIDÆ.

## KERIVOULA HARDWICKII.

*Vespertilio hardwickii*, Horsfield, Zoolog. Researches in Java (1825).

*Kerivoula hardwickii*, Gray, Ann. & Mag. Nat. Hist. 1842, p. 258; Dobson, Monogr. Asiat. Chiropt. p. 148, figs. *a, b, c* (1876).

Although the single specimen representing this genus is larger and has comparatively larger outer incisors and brighter-coloured fur than individuals of *K. hardwickii* from India and Java, I have nevertheless no hesitation in referring it to that species, with which it agrees very closely in all other respects.

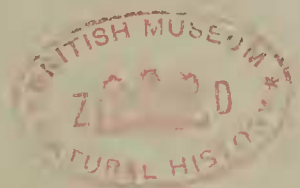




J. Smit del.

M. H. Hammett imp.

URUMYS RUFESCENS





J. Smit del. & lith

MACRODUS TIGENS

M & N Harhart imp



## Family EMBALLONURIDÆ.

## EMBALLONURA NIGRESCENS.

*Mosia nigrescens*, Gray, Voyage of the 'Sulphur,' Mammals, p. 23 (1844).

A single specimen of this, the smallest species of the genus, which is at once distinguished from *E. monticola* from the adjoining parts of the Oriental region by the very differently shaped muzzle, by the widely separated nostrils, and by its conspicuously smaller size.

*E. nigrescens* has hitherto been recorded from Amboina and Ternate only.

Besides the discovery of the new species described above, the following generalizations are afforded by an examination of the species represented in this collection:—

I. That New Britain and New Ireland agree very closely in their Chiropterous fauna with that of other lands within the Australian region (Austro-Malayan subregion), three species only out of twelve (*Macroglossus minimus*, *Phyllorhina galerita*, and *Kerivoula hardwickii*) extending also into the Oriental region.

II. That, to judge from the large proportion of frugivorous Bats in the collection (nearly two thirds of the whole), New Britain and New Ireland agree with the Oceanic Islands in this respect, rather than with the continental lands within the Australian region.

3. On the Rodents and Marsupials collected by the Rev. G. Brown in Duke-of-York Island, New Britain, and New Ireland. By EDWARD R. ALSTON, F.L.S., F.Z.S., &c.

[Received February 14, 1877.]

(Plates XVIII. & XIX.)

Mr. Selater has kindly intrusted me with the determination of the Rodents and Marsupials contained in Mr. Brown's interesting collection.

They are few in number, consisting of but six species. Three of these appear to be identical with animals known to inhabit New Guinea, while the remainder belong to hitherto undescribed species. The latter, however, find their nearest allies either in New Guinea or in Northern Australia, thus fully confirming the strictly Papuan character of the fauna of this group. The large proportion of new species in this small collection shows, nevertheless, that a perceptible amount of change has taken place, and leads us to hope that many novelties will yet reward the researches of Mr. Brown, after whom I propose to name the first of the new species:—

1. *MUS BROWNI*, sp. n.

Fur both above and below stiff and harsh, most of the hairs being developed into fine flattened and channelled spines; on the back a

few much longer cylindrical bristly hairs. Ears moderate, rounded, almost naked. Tail nearly naked, covered with about 150 rings of large scales mixed with very short stiff hairs. Hind feet large and broad, thumb of fore feet well developed, with a flat nail.

Upper parts grey mixed with reddish, each bristle being light grey at the base and either black or light rufous towards the tip, the longer hairs black throughout. Chin, throat, breast, belly, and inside of limbs dull white; feet white, each with a dark stripe on the upper surface; on the fore feet this mark is near the middle of the foot, on the hind feet nearer the outer edge. Ears and tail dusky.

Measurements of two specimens (in spirits):—

	♂ in.	♀ in.
Length of head and body . . . . .	5·60	5·15
„ head . . . . .	1·55	1·45
„ ear . . . . .	·55	·55
„ tail . . . . .	4·90	4·50
„ hind foot. . . . .	1·00	·95

Skull and teeth typically murine. Female with two pair of pectoral and two of abdominal teats; male with testes very largely developed.

This spiny Rat is nearly allied to the North Australian species described by the late Dr. Gray under the name of *Acanthomys leucopus*<sup>1</sup>; but it is a very much smaller species, and differs both in colour and proportions. The collection contains a female in skin and both male and female in spirits.

Along with these are four young Mice too immature to be safely determined. If, as I believe, they belong to the present species, the hair is softer and the colour of the upper parts more rufous in youth.

## 2. UROMYS RUFESCENS, sp. n. (Plate XVIII.)

Fur close and woolly, the longer hairs little developed. Ears short, rounded, naked. Tail shorter than the head and body, naked, tessellated with very small convex subcircular scales.

Upper parts bright chestnut, the hairs being lead-coloured at the base and broadly tipped with bright rufous, the longer hairs black, the top of the head more greyish. Lower parts white, the two colours being sharply defined; feet pale brownish. Ears and tail dusky.

Measurements of a female (in spirits):—

	in.
Length of head and body . . . . .	5·00
„ head . . . . .	1·45
„ ear . . . . .	·50
„ tail . . . . .	4·30
„ hind foot. . . . .	1·05

<sup>1</sup> P. Z. S. 1867, p. 598. This, like the present species, clearly belongs to true *Mus* and not to *Acanthomys*, Lesson (= *Acomys*, Geoffr.). It will therefore require to be renamed, Gray's specific title being preoccupied by the common North-American Mouse, *Mus leucopus*, Rafinesque (*Hesperomys leucopus* auctt.).

This handsome Rat is most nearly allied to the species from Salawatti, recently described by Dr. Peters and the Marquis G. Doria as *U. bruijni*<sup>1</sup>; but it is about a third smaller, is more uniformly rufous in colour, and has the tail markedly *shorter* (instead of longer) than the head and body. All the other described species have long particoloured tails<sup>2</sup>.

Dr. Peters, in his original characters of this genus<sup>3</sup>, says that the dentition is quite similar to that of *Mus*; but one of the present specimens, having the teeth less worn than in his example of *U. macropus*, shows that the ridges of the molars are not definitely divided into tubercles. The viscera are almost exactly like those of the common Rat, except that the cæcum is slightly more elongated.

### 3. PERAMELES DOREYANUS.

*Perameles doreyanus*, Quoy et Gaim. Voy. de l'Astrolabe, i. p. 100, Atlas, pl. xvi.

The collection contains one skin of this well-known Papuan species. First discovered (but not systematically named) by Lesson and Garnot on the island of Waigiou<sup>4</sup>, it was afterwards found by Quoy and Gaimard at Dorey Harbour, New Guinea. According to Dr. Gray, specimens were sent by Mr. Wallace from the Aru Islands<sup>5</sup>; but the *Perameles* of that group has since been separated by Dr. Peters and the Marquis G. Doria as *P. aruensis*<sup>6</sup>; and the same authors have described two other allied species—*P. rufescens* from the Ké Islands<sup>7</sup>, and *P. longicaudata* from New Guinea<sup>8</sup>.

### 4. BELIDEUS ARIEL.

*Belideus ariel*, Gould, P. Z. S. 1842, p. 11.

This pretty little Flying Phalanger is represented by an adult male and female in skin, and an immature male in spirit. In the female the extreme tip of the tail is white, doubtless an individual variety. As in other Papuan examples, there is a much broader dark mark round the eye than in the North-Australian specimens described by Mr. Gould<sup>9</sup>; but I do not think they can be specifically separated; and when a sufficient series from different parts of the continent of Australia are compared I suspect that this species will have to be united with the southern *B. breviceps*.

The known range of this Phalanger is extensive. First described from North Australia, it has been found in New Guinea by S. Müller, in Batchian and the Aru Islands by Wallace and Von Rosenberg, and in Halmahera by Bernstein.

<sup>1</sup> Ann. Mus. Civ. Genova, viii. p. 336 (1876).

<sup>2</sup> Dr. A. B. Meyer lately indicated a new species from New Guinea under the name of *U. papuanus* (Ann. and Mag. Nat. Hist. 1876, xvii. p. 146), without giving any description. As he states, however, that it is nearly allied to *U. aruensis*, Gray, it can hardly be the present animal.

<sup>3</sup> Monatsb. Ak. Berlin, 1867, p. 343.

<sup>4</sup> Voy. de la Coquille, i. pt. 1, p. 123.

<sup>5</sup> P. Z. S. 1858, p. 113.

<sup>6</sup> Ann. Mus. Civ. Genova, vii. p. 542.

<sup>7</sup> *Op. cit.* p. 541.

<sup>8</sup> *Op. cit.* viii. p. 335.

<sup>9</sup> In the figure in the 'Mammals of Australia' (i. pl. xxvii.) no black mark whatever is shown; but a narrow black line is mentioned in the description.

## 5. CUSCUS ORIENTALIS.

*Didelphys orientalis*, Pallas, Misc. Zool. p. 59.

An adult female *Cuscus* in skin and a half-grown female in spirits are strikingly different in appearance; but I cannot at present separate them from this very variable species. The former is of a dark sooty grey above, with an obscure dorsal streak; the fur is very close and woolly; and the tips of the hairs have a bright silvery lustre. The latter (which measures, head and body, 8·80 inches, tail 7·80 inches) is bright shining rufous above, slightly washed with black, but with no definite dorsal streak; lower parts and spot below ear light yellow.

Both differ from the characters usual given of *C. orientalis* in having only *two* small incisors behind the large central lower pair, and in wanting the small extra premolar in the upper jaw. But, as Mr. Waterhouse has observed<sup>1</sup>, these small teeth are not to be trusted in this group. I find that a skull of *C. ursinus* in the British Museum has two small incisors on one side and three on the other; and of two skulls of *C. celebensis*, Gray, a male has one only in each ramus, while a female has one on the right and three on the left. In all other essential characters Mr. Brown's specimens agree with *C. orientalis*; and it must be left to future observation to show whether the peculiarity of their dentition is or is not constant.

According to Lesson and Garnot this animal is termed *Kapoune* by the natives of New Ireland, with whom it is a favourite article of food<sup>2</sup>.

## 6. MACROPUS LUGENS, sp. n. (Plate XIX.)

Muffle entirely naked, the bare space extending in a band over each nostril. Ears moderate, sparsely haired except near the base. Tail clad for the first three inches with short woolly hair, thence to the end scaly, nearly naked at the sides, more thickly clad above and below with short stiffish hairs. Fur moderately soft, not close-set, with no under-fur; hair of occiput radiating from a point a little behind the ears, that of the nape directed *backwards*, that of the vertex *forwards*, forming a transverse crest where it meets the fur of the forehead and temples. Hair of breast radiating from each axilla, that of the throat and chin directed *forwards*.

Upper parts almost uniform umber-brown, darkest on the back, the hairs unicolorous to the base, flanks and thighs lighter, feet darker brown. From the upper lip a broad but ill-defined brownish-white stripe passes to below the eye. Chin brownish black; throat, breast, and belly pale isabelline.

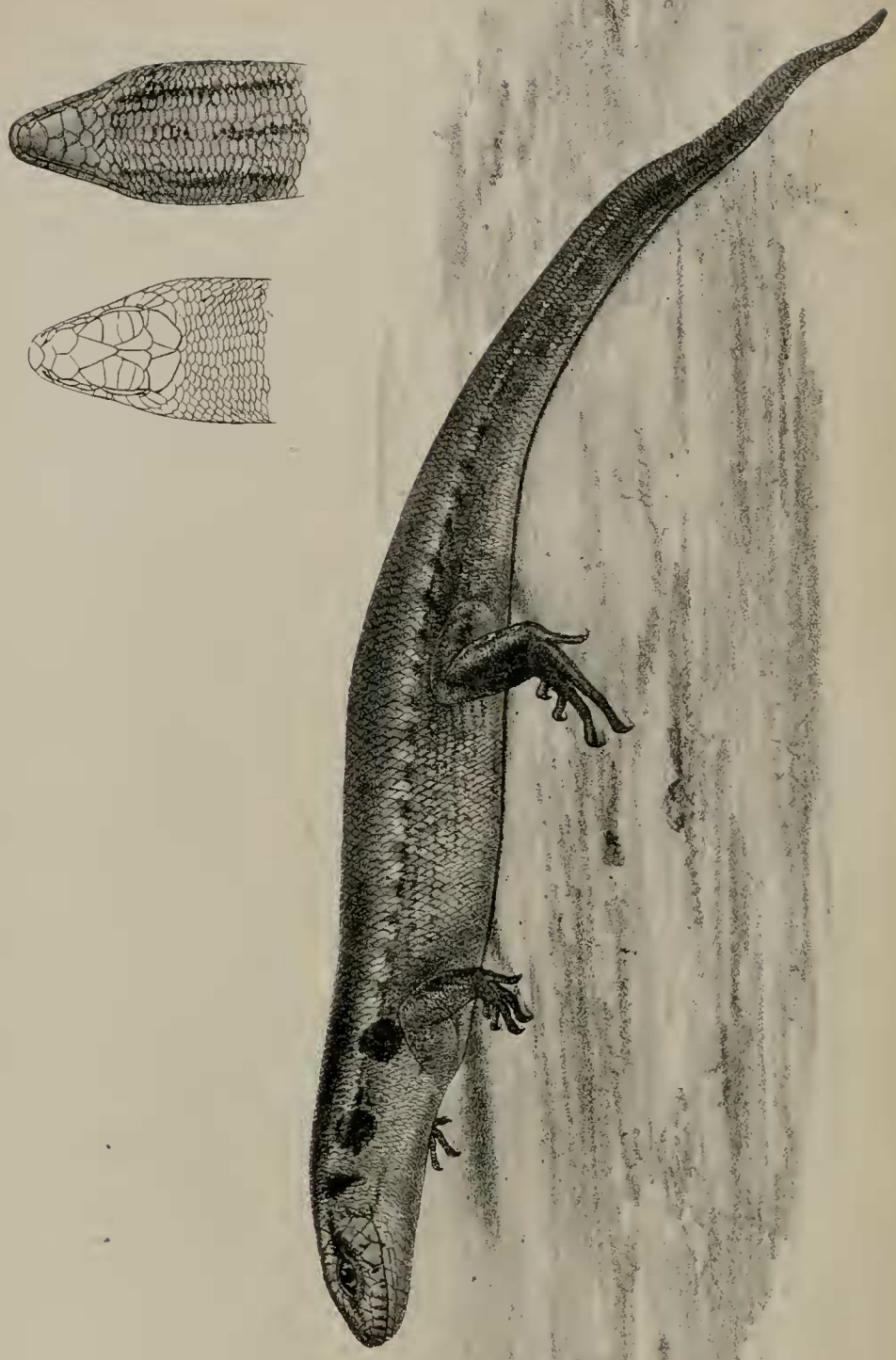
Approximate measurements (in skin) of an immature male:—

	in.
Length of head and body.....	22·00
„ head.....	3·50
„ ear.....	1·75
„ tail.....	14·00
„ hind foot (without claw).....	4·50

<sup>1</sup> Nat. Hist. Mamm. i. p. 265.

<sup>2</sup> Voy. de la Coquille, Zool. i. p. 158.



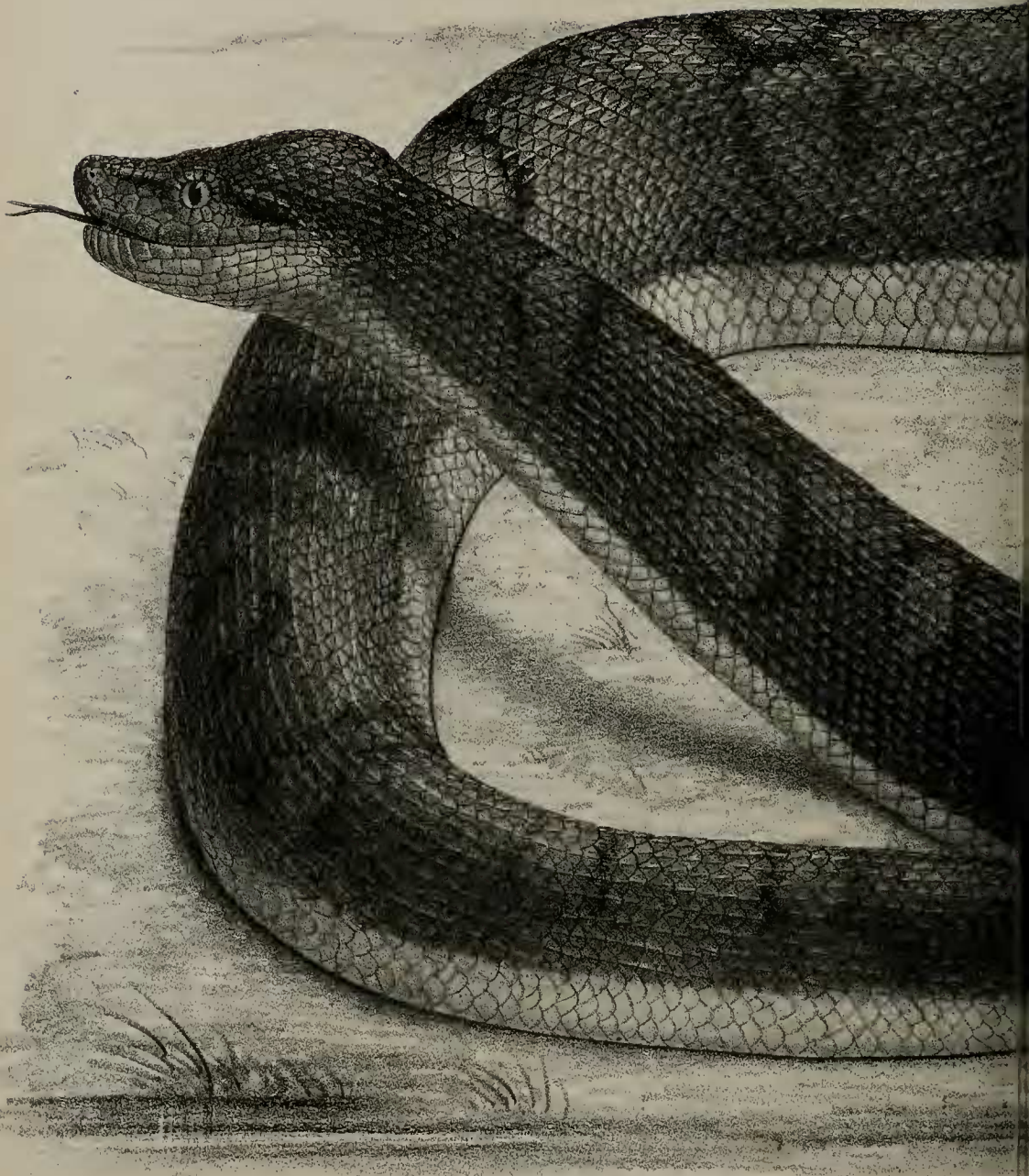
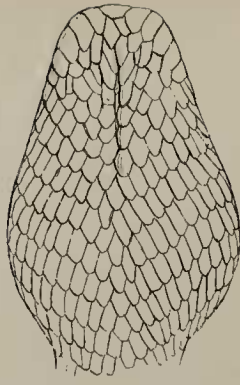
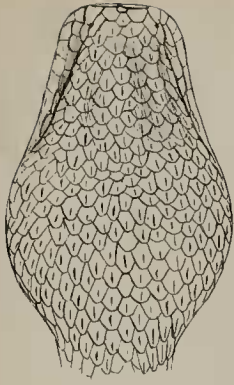


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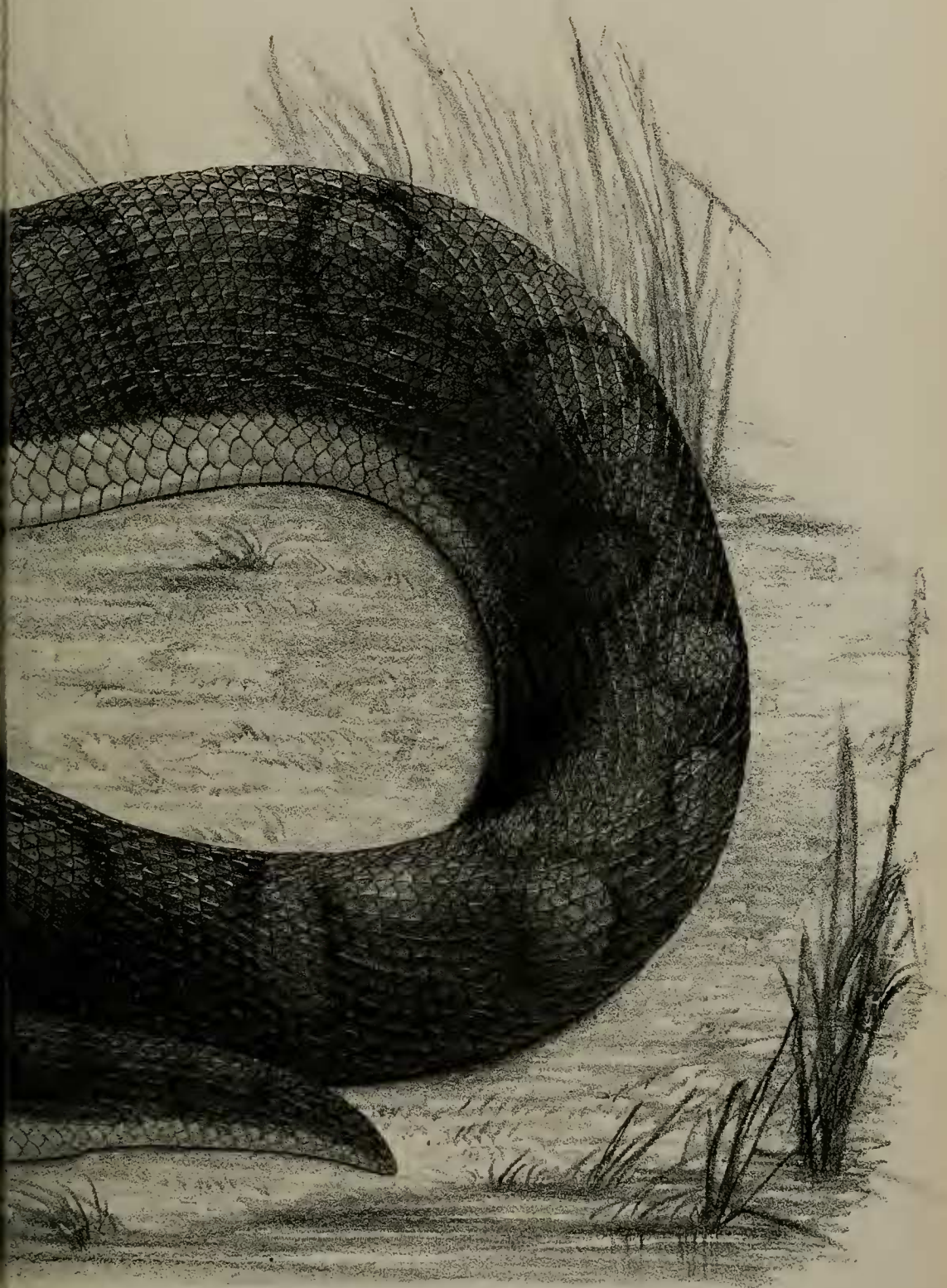
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HINULIA MEGASPILA.











The third upper incisor is but little longer than the second, and has the external fold close to its posterior border. The milk-molars are still retained; but the premolar, when exposed in the maxillary, is found to be only slightly longer than the first true molar, the former measuring  $\cdot 27$ , and the latter  $\cdot 22$  of an inch.

This interesting Kangaroo bears a striking superficial likeness to *Dorcopsis luctuosa* (D'Alb.)—a resemblance which, along with its generally sad-coloured coat, suggests the specific name proposed. Even externally, however, it may be at once distinguished by the direction of the hair of the nape, the nearly naked scaly tail, and the uniform brown of the upper parts, while its dentition at once shows it to be not a *Dorcopsis* but a true *Macropus*.

When Mr. Garrod first clearly established the distinctions between *Dendrolagus*, *Dorcopsis* and *Macropus*<sup>1</sup>, only one species of the last genus was known to inhabit the Austro-Malayan Subregion, namely *M. bruni* (Schreb.), from the Aru and Ké Islands. Since then two species have been described from New Guinea—*M. papuanus* by Dr. Peters, from the eastern extremity of the island<sup>2</sup>, and *Halmaturus crassipes* by Mr. E. Pierson Ramsay, from Port Moresby<sup>3</sup>. From all of these, as well as from all the Australian species, *M. lugens* appears to be perfectly distinct. In the character of the covering of the tail it most resembles *M. papuanus*, from which, however, it differs in its entirely bare muffle, and in the proportions of its upper incisors, as well as in coloration.

I trust that Mr. Brown may soon be able to procure fully adult examples of this Kangaroo, and also to give us information as to the exact habitat of this and the other species contained in his collection.

#### 4. On a Collection of Reptiles and Fishes from Duke-of-York Island, New Ireland, and New Britain. By DR. ALBERT GÜNTHER, V.P.Z.S.

[Received Feb. 20, 1877.]

(Plates XX. & XXI.)

A collection of Reptiles made by the Rev. G. Brown on Duke-of-York Island forms a valuable contribution to the very scanty knowledge we possess at present of the Reptiles of New Ireland and New Britain. Indeed, since the visit of the French naturalists Lesson and Garnot, those islands have been entirely neglected, only a few species having reached European collections from the neighbouring Solomon Islands. The species forming this first collection of Mr. Brown, are not sufficient in number to base upon them a more precise conclusion than that arrived at by Mr. Wallace, who appears to

<sup>1</sup> "On the Kangaroo called *Halmaturus luctuosus* by D'Albertis and its Affinities," P. Z. S. 1875, pp. 48-59, pls. vii.-ix.

<sup>2</sup> Ann. Mus. Civ. Genova, vii. p. 544 (1875).

<sup>3</sup> Proc. Linn. Soc. New S. Wales, i. p. 162 (1876).

be quite correct in including these islands in his Austro-Malayan sub-region, as will be seen from the following list, in which I have noted the geographical range of each species.

### *List of Reptiles.*

#### LIZARDS :

1. *Monitor chlorostigma*, Cuv. .... Celebes, Ceram, New Guinea, North Australia, Solomon Islands.
2. *Eumeces albofasciolatus*, Gthr..... North Australia.
3. *Hinulia megaspila*, sp. n.
4. *Keneuxia smaragdina*, Less. .... Ceram, Amboyna, Philippines, Pelew Island, New Guinea.
5. *Mabouia carteretii*, D. & B..... New Ireland, New Guinea, Amboyna, and Wokan (*Doria*).
6. *Mabouia cyanura*, Less. .... Amboyna, Mysol, New Guinea, hence throughout Polynesia.
7. *Mabouia nigra*, Hombr. & Jacq. .... Fiji Islands, Samoa Islands, Contrariété Island.
8. *Gecko vittatus*, Latr. .... Mysol, Ceram, Amboyna, New Guinea, Aru Islands.
9. *Hypselurus macrolepis*, Ptrs. .... Pelew and Solomon Islands.

#### SNAKES :

1. *Lielaphis modestus*, Schleg. .... Ceram, Amboyna, Mysol, Aru Islands.
2. *Tropidonotus hypomelas*, sp. n.
3. *Dendrophis solomonis*, Gthr. .... Solomon Island.
4. *Dendrophis macrops*, sp. n.
5. *Dipsas irregularis*, Merr. .... Celebes, Ceram, Amboyna, Mysol, Sangi Isl., New Guinea, Key Isl.
6. *Liasis amethystinus*, Schneid. .... Ceram, Mysol, Aru and Key Islands, New Ireland.
7. *Nardoa schlegelii*, Gray. .... New Ireland.
8. *Ecygrus carinatus*, Schneid. .... Ceram, Amboyna, Mysol, New Guinea.
9. *Erebophis asper*, g. et sp. n.
10. *Diemenia mülleri*, Schleg. .... New Guinea, North Ceram.
11. *Platurus fasciatus*, Daud. .... Throughout the East Indian archipelago and Polynesia.

### *Descriptive Notes.*

#### HINULIA MEGASPILA, sp. n. (Plate XX.)

Resembles *H. (Eumeces) aruensis* in shape and general appearance. No supranasal shields. Lower eyelids scaly. Internasal broad and short, transversely linear, separated from the vertical by two frontals, which are broadly in contact with each other. In *E. aruensis* the vertical is in contact with the internasal. Postnasals two, small and lateral, followed by a single large loreal; upper labials eight. Ear-opening large, oval, without prominent scales; forty-one or forty-seven longitudinal series of scales round the body; about fifty-eight transverse series between the fore and hind limbs; two larger præ-anal plates, with some smaller lateral ones. The fore limbs reach to the middle of the eye when stretched forward, the hind limbs somewhat beyond the middle of the trunk. Fingers and toes short; third and fourth fingers equal and longer than the second; fourth hind toe the longest; third longer than the fifth. Colour brown;

three large round black spots on the side of the neck; the first above the ear-opening, the second immediately behind it, the third above the axil; a series of numerous smaller black irregular spots along the upper part of the sides. Sides finely mottled with black striæ. Lower parts whitish; throat of one specimen with three blackish longitudinal bands, the middle being much less distinct than the lateral.

	in.	lin.
Total length . . . . .	8	0
Distance of the snout from the eye . . . . .		3½
"                    "            ear . . . . .		9
"                    "            axil . . . . .	1	5
"                    "            vent . . . . .	3	11
Length of fore limb . . . . .	1	0
"    third finger . . . . .		2½
"    hind limb . . . . .	1	6
"    second toe . . . . .		2
"    third toe . . . . .		3
"    fourth toe . . . . .		5½
"    fifth toe . . . . .		3

#### LIELAPHIS MODESTUS.

A Snake widely spread in the Austro-Malayan region, varying in some points which may generally be relied upon as constant characters, and showing affinities to several very distinct types, hence often misunderstood, and appearing in the literature under many denominations. It is distinguished by a depressed head, with rather broad snout, small eye, and subvertical pupil, appearing round when expanded. Normally two shields in front and behind the eye; but these shields are frequently confluent into one, sometimes on one side of the specimen only; sometimes the lower præocular coalesces with the loreal. Seven (very rarely eight) upper labials, the third and fourth entering the orbit. Arrangement of the temporals irregular and variable. Body elongate, slightly compressed, the ventral scutes showing more or less lateral keels, which disappear entirely in large females. Scales smooth, in seventeen rows. Ventral scutes varying between 180 and 212; anal entire; subcaudals double, exceptionally confluent into a single series. The maxillary series of teeth is formed by from ten to twelve teeth, the front teeth being the smallest; they increase in strength towards the middle of the boue, one or two before the penultimate being again smaller; the penultimate is sometimes as long as, sometimes a little longer than, the middle, sometimes not separated by an interspace from the preceding, sometimes separated by a very small space only; the last tooth generally, again, is small: it is not rarely altogether doubtful whether the dentition of a specimen should be considered diacranterian or sycranterian; but it is never lycodont.

The coloration is very uniform, above dark, below lighter, the dark colour sometimes descending on the scutes, the light sometimes

ascending on the sides. Specimens from Ceram and Amboyna show generally a light colour.

To this species I refer now the following Snakes, described by various authors:—

1837. *Lycodon modestus*, Schleg. Essai ii. p. 119 ; from Amboyna.  
 1854. *Lycodon modestum* and *L. lividum*, Dum. & Bibr. pp. 380  
 and 381 ; from Amboyna and Pulo Samao.  
 1861. *Ablabes greineri*, Bleeker, Rept. of Amboyna ; from Amboyna.  
 1861. *Coronella rosenbergii*, Bleeker, Rept. of Ceram ; from Ceram.  
 1863. *Lielaphis holochrous*, Günther, P. Z. S. p. 59 ; from Ceram.  
 1874. *Lycodon aruensis*, Doria, Ann. Mus. Gen. p. 352 ; from the Arn Islands.

The specimens which I have examined are from Ceram, Mysol, and Amboyna ; and they differ less among each other than the two specimens from the Duke-of-York Island. Both have a synerantarian dentition (ten teeth) ; but one has eight upper labials, all the subcaudals divided, and 197 ventrals ; the other has seven upper labials, 180 ventrals, and, singularly enough, only the first two and the last nineteen subcaudals divided, the sixty-three middle ones being entire.

Other species belong to the same genus, and one or the other may eventually prove to be identical with the one described, viz. :—

*Lielaphis batjanensis*, Gthr., from Batjan.

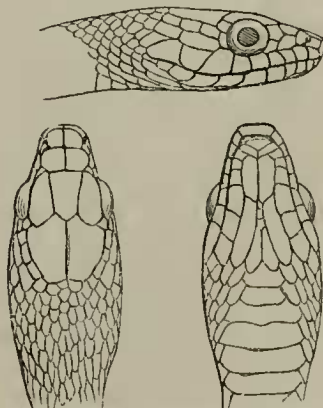
*Zamenophis australis*, Gthr., from Cape York, with which *Lycodon keyensis* of Doria, from the Key Islands, appears to be identical.

*Lycodon parvus*, Meyer, from Jobi.

#### TROPIDONOTUS HYPOMELAS, sp. n.

Body very slender ; head moderately long and deep ; eye large ;

Fig. 1.



Head of *Tropidonotus hypomelas*.

scales in seventeen rows, all keeled; ventrals 196, anal bifid; subcaudals 99; anterior frontals truncated in front; loreal as high as long; two præoculars, the upper just reaching to the upper surface of the head; three postoculars, the lower of which is the narrowest and smallest; 9 upper labials, the fifth and sixth entering the orbit; temporals 2+3, the two anterior in contact with the postocular. The dentition is syncranterian, almost isodont. Upper parts brownish olive, with small blackish and whitish spots longitudinally arranged. Lower part of the anterior half of the trunk whitish, with a series of black spots along the median line of the abdomen, each scute having a black spot. In the middle of the length of the trunk the dark colour of the sides gradually encroaches on the scutes, which, on the hinder half of the body and on the tail, are uniform blackish.

One specimen, thirty-two inches long, the length of the tail being nine inches.

*DENDROPHIS MACROPS*, sp. n.

This Snake is distinguished from *Dendrophis solomonis* by its large eye, the diameter of which exceeds its distance from the nostril. Scales in thirteen rows; loreal large, longer than high; eight or nine upper labials, two of which enter the orbit; one præocular

Fig. 2.



Head of *Dendrophis macrops*.

not extending to the vertical; two postoculars; temporals irregularly arranged, 2+2+2; ventrals 195, strongly keeled; subcaudals 140; vertebral scales of moderate size; upper parts uniform olive-coloured; scales with an elongate white spot on the outer margin; upper part of head brownish olive; lower parts uniform greenish.

One specimen, forty-six inches long, the tail being fourteen inches.

*EREBOPHIS*, g. n. *Erycid*.

Body stout and thick, covered with short scales, which are arranged in numerous rows, and provided with exceedingly strong keels. Head resembling that of a Crotaline snake, covered above and on the side with numerous scales; rostral flat, truncated, oblique, not extending to the upper surface of the snout; nostril very small, in the middle of an oblong shield; eyes small, surrounded by small scales; ventrals rather narrow; tail very short, slightly prehensile, with a single series of subcaudals; teeth in both jaws numerous, the anterior of the maxillary, mandible, and palatine bones much enlarged; tongue remarkably slender; no rudiments of hind limbs.

## EREBOPHIS ASPER, sp. n. (Plate XXI.)

The head of this singular Snake is subtriangular, with high subvertical sides, swollen behind and covered with small, obtusely keeled scales; snout truncated in front, with a distinct canthus rostralis, the nasal plate being immediately below the canthus. Ten or eleven low labial shields form the margin of the upper lip, and are covered with minute tubercles. The skin behind the eye forms a fold with a more or less distinct hollow below it. Thirteen lower labials; gular scales in many series.

The body is very thick and short, distinctly compressed. The scales are short and rounded behind, thick and provided with a strong keel, forming in the middle of the body about forty-one longitudinal series. The longitudinal series do not run parallel to the vertebral line, but gradually descend backwards towards the belly. The three or four outer series of scales are smooth, the outermost being the largest. Ventrals 146; subcaudals 20.

Upper parts dark brown, with indistinct patches of lighter brown. All the lower parts and the smooth lateral series of scales yellowish.

Only one specimen of this highly interesting Snake is in the collection; it is twenty-nine inches long, the head measuring  $1\frac{3}{8}$  inch, and the tail two inches.

## BATRACHIANS.

## PLATYMANTIS PLICIFERA, Gthr.

Singular as it may appear, the *Platymantis* of Duke-of-York Island is not identical with *P. vitiana* from the Fiji Islands, but with *P. plicifera* from the Philippines. If single examples had been examined, slight differences in the form of the foremost part of the snout and in the length of the hind limb might have been regarded as indicative of specific distinctness; but they prove to be merely individual when the whole series of specimens (five from Duke-of-York Island and six from the Philippines) is examined.

## FISHES.

The species sent by Mr. Brown are twenty-five in number, belonging to the most common forms generally distributed over the tropical parts of the Indo-Pacific region; and as they evidently form but a very small proportion of the fish-fauna of this archipelago, an enumeration of the species would add nothing to our knowledge. However, the collection contained a specimen of *Histiopterus typus* (Schleg.), a species hitherto believed to be peculiar to the Japanese seas, and represented on the eastern and southern coasts of Australia by *H. labiosus* and *H. recurvirostris*.



5. On a Collection of Crustacea made by the Rev. G. Brown, C.M.Z.S., on Duke-of-York Island. By EDWARD J. MIERS, F.L.S., F.Z.S., Assistant in the Zoological Department, British Museum.

[Received February 19, 1877.]

The Crustacea collected by Mr. Brown belong, with one exception (*Lysiosquilla maculata*), to the Decapoda, and amount in all to forty-four specimens, representing sixteen species. Although none of the species collected are new to science, several are interesting and little-known forms. I may particularly mention the *Grapsodes notatus* of Heller, originally described from specimens collected by the Novara Expedition at the Nicobars, and peculiar on account of the form of the carapace and structure of the orbital region; and the *Sesarma rotundata* of Hess, hitherto recorded only from Sydney, New South Wales.

I have added a description of a remarkable species of *Sesarma* (*S. taniolata*) in the British-Museum collection. The majority of the species collected by Mr. Brown are well-known forms, and generally distributed throughout the Indo-Pacific region.

#### ATERGATIS FLORIDUS.

*Cancer floridus*, Linn. Syst. Nat. (ed. xii.) p. 1041 (1766).

*Cancer ocyroë*, Herbst, Naturg. Krabben u. Krebse, iii. (part 2) p. 20, pl. liv. fig. 2 (1801); M.-Edw. Hist. Nat. Crust. i. p. 375 (1834).

*Atergatis floridus*, De Haan, Faun. Japon. Crust. (Dec. ii.) p. 46 (1835); A. M.-Edw. Nouv. Archiv. Mus. Hist. Nat. i. p. 243 (1865).

One example, a female, of this very common and widely distributed Indo-Pacific species is in the collection.

#### CARPILIUS CONVEXUS.

*Cancer convexus*, Forskål, Descript. Animalium &c., Insecta, p. 88 (1775).

*Carpilius convexus*, M.-Edw. Hist. Nat. Crust. i. p. 382, pl. xvi. figs. 9 & 10 (1834); A. M.-Edw. Nouv. Archiv. Mus. Hist. Nat. i. p. 215 (1865).

Two specimens, both females, are in the collection. This is also a very common species, and generally distributed throughout the Indo-Pacific region. In *C. convexus* the abdomen of the male is 6-, of the female 7-jointed; but in the males a small marginal fissure is usually to be observed on each side of the abdomen, marking the line of coalescence of the third and fourth segments. In the females the right chela is usually very large and massive.

## ETISUS DENTATUS.

*Cancer dentatus*, Herbst, Naturg. Krabben u. Krebse, i. p. 186, pl. xi. fig. 66 (1790).

*Etisus dentatus*, M.-Edw. Hist. Nat. Crust. i. p. 411 (1834).

One specimen, a female with ova, is in the collection. This is another widely distributed species. Specimens are in the British-Museum collection from the Mauritius, Torres Straits, and New Caledonia.

## ACTÆODES TOMENTOSUS.

*Zoymus tomentosus*, M.-Edw. Hist. Nat. Crust. i. p. 385 (1834); Règne Animal de Cuvier, Atlas, pl. xi. *bis*, fig. 2.

*Actæodes tomentosus*, Dana, U.S. Expl. Exp. xiii. Crust. i. p. 197 (1852).

*Actæa tomentosa*, A. M.-Edw., Nouv. Archiv. Mus. Hist. Nat. i. p. 262 (1865).

Four specimens of this species, all of them males and three of large size, were collected. Length of largest specimen  $\frac{5}{8}$  inch, greatest breadth  $1\frac{1}{3}$  inch. Like most of the species collected, this is a very common Indo-Pacific species.

I may here observe that M. A. Milne-Edwards, in his revision of the Cancridæ (Nouv. Arch. Mus. Hist. Nat. i. p. 259, 1865), has united the genera *Actæa* and *Actæodes*, not considering the excavate or non-excavate finger-tips a character of generic importance. Dana, on the other hand (Expl. Exp. Crust. i. p. 147, 1852), has based his subfamilies Xanthinæ and Chlorodinæ upon this very peculiarity of structure, and has shown that the genera may be arranged in each division in two parallel series. I am inclined to think the latter the most natural and convenient arrangement of the genera; but it will probably be necessary, if Dana's system be adopted, to unite the subfamilies Cancrinæ and Xanthinæ, as the genus *Cancer* bears nearly the same relation to *Etisus* in the Chlorodinæ, as *Liomera* to *Carpilodes*, or *Xantho* to *Leptodius*.

## LEPTODIUS EXARATUS, var. SANGUINEUS, Milne-Edwards.

? *Chlorodius sanguineus*, Milne-Edwards, Hist. Nat. Crust. i. p. 402 (1834); Dana, U.S. Expl. Exp. xiii. Crust. i. p. 207, pl. xi. fig. 11 (1852).

*Chlorodius nodosus*, Randall, Journ. Ac. Nat. Sci. Phil. p. 111 (1839); Dana, U.S. Expl. Exp. xiii. Crust. i. p. 210, pl. xi. fig. 14 (1852).

? *Leptodius sanguineus*, A. M.-Edw. Nouv. Archiv. Mus. Hist. Nat. ix. p. 224 (1873).

Five males and one female specimen of a *Leptodius* were collected, which I should have referred, without any doubt, to the *Chlorodius sanguineus* of Milne-Edwards, were it not that M. Alphonse Milne-Edwards in his description says:—"Jamais il n'y a de tubercules sur les parties saillantes." In the specimens before me there is a slight tubercle on the carapace behind each tooth of the antero-

lateral margins. The *Chlorodius nodosus* of Randall, as figured by Dana (*l. c.*), is evidently the same species and variety as the specimens from Duke-of-York Island, and is not, I think, distinct from *C. sanguineus* as figured by the same author. The principal character that differentiates this variety from the typical *exaratus* is the presence of an additional small tooth behind the last tooth of the antero-lateral margins. *C. sanguineus* is considered a distinct species by Dana, and, with some hesitation, by A. Milne-Edwards, but was united with *C. exaratus* by Stimpson in his preliminary "Report on the Crustacea collected by the United-States Expedition to the North Pacific" (*Proc. Ac. Nat. Sci. Phil.* p. 34, 1858).

#### OZIUS RUGULOSUS.

*Ozius rugulosus*, Stimpson, *Proc. Ac. Nat. Sci. Phil.* p. 34 (1858); Heller, *Voy. Novara, Crust.* p. 22, pl. iii. fig. 1 (1865); A. M.-Edw. *Nouv. Archiv. Mus. Hist. Nat.* ix. p. 240, pl. xi. fig. 3 (1873).

Three specimens of this species are in the collection—two females and a young male. Specimens are in the British-Museum collection from the Mauritius, Australian coast, and New Hebrides; and it has been recorded from the Nicobars, Bonin Islands, Tahiti, and New Caledonia. Thus it is evident that its range extends over the whole Indo-Pacific region; but it is probably nowhere a common species.

#### ERIPHIA LÆVIMANA.

*Eriphia lævimana*, M.-Edw. *Hist. Nat. Crust.* i. p. 427 (1834); Dana, *U.S. Expl. Exp.* xiii. *Crust.* i. p. 249, pl. xiv. fig. 7 (1852); A. M.-Edw. *Nouv. Archiv. Mus. Hist. Nat.* ix. p. 255 (1873).

Two males and four females were collected by Mr. Brown. In the young animal the series of tubercles upon the frontal margin are not developed, the margin appearing subentire; but those on the postfrontal region and antero-lateral margins are clearly distinguishable. *E. lævimana* is distributed throughout the Indo-Pacific region; there are specimens in the collection of the British Museum, from Madagascar and the Mauritius, that certainly belong to this species, and not to the allied *E. smithii* of M'Leay (*Annulosa* in Smith's *Zool. S. Africa*, p. 60), figured by Krauss (*Süd-Afrikan. Krust.* p. 36, pl. ii. fig. 3, 1843), of which specimens, from Port Natal, are in the Museum collection.

#### OCYPODE CERATOPHTHALMA.

*Cancer ceratophthalmus*, Pallas, *Spic. Zool.* ix. p. 83. pl. v. figs. 7, 8 (1772).

*Ocypode ceratophthalma*, Fabr. *Ent. Syst. Suppl.* p. 347 (1798); M.-Edw. *Hist. Nat. Crust.* ii. p. 48 (1837); Règne Animal de Cuvier, *Atlas, Crust.* pl. xvii. fig. 1; *Ann. Sci. Nat. (Sér. 3) Zool.* xviii. p. 141 (1852); A. M.-Edw. *Nouv. Archiv. Mus. Hist. Nat.* ix. p. 270 (1873).

In the collection are two specimens of an *Ocypode*, males, and both in a mutilated condition, which I refer to this species. In both specimens are to be seen the large orange-red blotches on the sides

and back of the cardiac region which always characterize *O. ceratophthalma*. The terminal spines of the eyes in one specimen are quite short; in the other specimen they are longer, but not one third of the total length of the eye. Occasionally they are very greatly elongated; and evidently their length is of no value as a specific character. *O. ceratophthalma* is a very common and generally distributed Indo-Pacific species.

#### GRAPSUS STRIGOSUS.

*Cancer strigosus*, Herbst, Naturg. der Krabben und Krebse, iii. (part 1) p. 55. pl. xlvii. fig. 7 (1799).

*Grapsus strigosus*, Latr. Hist. Crust. et Ins. vi. p. 70 (1803); M.-Edw. Hist. Nat. Crust. ii. p. 87 (1837); Ann. Sci. Nat. Zool. (Sér. 3) xx. p. 169 (1853); A. M.-Edw. Nouv. Archiv. Mus. Hist. Nat. ix. p. 286 (1873), *ubi synon.*

Two specimens, a male and a female with ova, both in an imperfect condition, are in the collection. M. Alphonse Milne-Edwards (*l. c.*) has excellently summarized the characters which distinguish this common and variable species from the closely allied and still more common and variable *G. pictus*, and has indicated the synonymy of each species.

*G. strigosus* is distributed throughout the Indo-Pacific region, and is even (as is also *G. pictus*) found on the western coast of the American continent.

#### GRAPSODES NOTATUS.

*Grapsodes notatus*, Heller, Reise der Novara, Crust. p. 58, pl. v. fig. 2 (1865).

Three specimens, a young male and two females, are in the collection, which, I think, belong to this species. Dr. Heller's specimens were from the Nicobars; both the genus and species are unrepresented in the collection of the British Museum. The antero-lateral margins are described as 3-toothed, as are those of the specimens from Duke-of-York Island (including the external orbital tooth); in the figure of *G. notatus* there is an additional small antero-lateral tooth: this is probably an error of the draughtsman. As in the allied genus *Nectograpsus*, there is a wide hiatus between the outer orbital tooth and the suborbital lobe; this is mentioned in Dr. Heller's description, but not properly represented in the figure. Dr. Heller's genus *Grapsodes* is evidently very nearly allied to *Nectograpsus* of the same author, principally differing in the existence of antero-lateral marginal teeth. The two genera, in fact, bear the same relation to one another in the subfamily Sesarminæ as do certain species of *Chasmagnathus* to *Cyclograpsus* in the Grapsinæ.

#### SESARMA ROTUNDATA.

*Sesarma rotundata*, Hess, Archiv. f. Naturg. xxxi. p. 149, pl. vi. fig. 9 (1865).

Three specimens of this species, all of them males, are in the collection. *S. rotundata* belongs to the section of the genus in

which the lateral margin of the carapace is 3-toothed, and is distinguished by the peculiar convexity of the hepatic regions, and the granulation of the front part of the carapace, and the anterior legs. The ambulatory legs are long and slender, the last joint much shorter than the preceding. The specimen described by Hess was from Sydney, New South Wales; and specimens are in the British-Museum collection from the Fiji Islands (Nairai) and Eastern seas.

I subjoin the description of a species in the British-Museum collection<sup>1</sup>.

*SESARMA (HOLOMETOPUS) AUBRYI.*

*Sesarma (Holometopus) aubryi*, A. M.-Edw. Nouv. Archiv. Mus. Hist. Nat. Bulletin, v. p. 29 (1869); ix. p. 307, pl. xvi. fig. 3 (1873).

Six specimens, four males and two females, of which one bears a considerable quantity of ova, were collected. They agree in all particulars with A. Milne-Edwards's description of the species, based upon specimens collected at New Caledonia, except that in the figure of the abdomen, probably that of a male, the sides are represented nearly straight, and the terminal joint as broad at base as the preceding; whereas in the specimens from Duke-of-York Island (as is usual in *Sesarma* and the allied genera) the terminal abdominal joint is much smaller than the preceding at its base.

In the *Sesarma (Pachysoma) hæmatocheir* of De Haan (Faun. Japon. Crust. p. 62, pl. vii. fig. 4), upon which Milne-Edwards founded the genus *Holometopus*, the front is broader in proportion to its depth, the abdomen has the sides more decidedly concave, and the terminal joint longer; the differences between the two species, however, are very slight, and may depend upon the age of the specimen.

*CARDISOMA CARNIFEX.*

*Cancer carnifex*, Herbst, Naturg. Krabben u. Krebse, i. p. 163, pl. xli. fig. 1, ♂ (1796).

<sup>1</sup> *SESARMA TENIOLATA.*

*Sesarma teniolata*, White, List Crust. Brit. Mus. p. 38 (1847), sine descr.

Carapace quadrate and very convex, the groove defining the gastric region deep, the lateral margins with two prominent teeth (including the external orbital tooth). Front nearly vertically deflexed, the anterior margin sinuated, the median sinus wide; postfrontal lobes four, not very abrupt; carapace behind the lobes slightly granulated. Anterior legs robust; arm with a very strong tooth near the distal extremity of its upper margin; wrist closely covered with granules or small tubercles, each of which is itself crenulated; hand granulated externally, and with a strong granulated ridge on its inner surface; upper margin with a *longitudinal*, comb-like, closely pectinated ridge; mobile finger with a longitudinal ridge on its upper surface marked with about sixty transverse striæ. Ambulatory legs compressed and slightly hairy. Abdomen of male with the last joint not half the width of the preceding. Length and breadth of carapace about  $1\frac{2}{3}$  inch.

*Hab.* Philippine Islands (*Cuming*, coll. Brit. Mus.).

This species is allied to *S. tetragona*, Fabr., but is distinguished from it by the curious longitudinal comb-like ridge on the upper margin of the hand and the transversely striated ridge on the mobile finger.

*Cancer hydromus*, Herbst, *l. c.* p. 16, pl. xli. fig. 2, ♀ (1796).

*Cardisoma carnifex*, Latr. Encycl. Méth. Hist. Nat. x. p. 685 (1825); M.-Edw. Hist. Nat. Crust. ii. p. 23 (1837); A. M.-Edw. Nouv. Arch. Mus. Hist. Nat. ix. p. 264 (1873).

In the single imperfect specimen (male) of this species in the collection a very small tooth exists at some distance behind the external orbital angle; the raised line defining the antero-lateral margins is continued but a short distance backward beyond this tooth; the left anterior leg is the larger; the ambulatory legs are clothed with long hairs.

#### PAGURUS PUNCTULATUS.

*Pagurus punctulatus*, Olivier, Encycl. Méth. viii. p. 641 (1811); M.-Edw. Hist. Nat. Crust. ii. p. 222 (1837).

A single specimen of this very common species is in the collection, a female, inhabiting the shell of *Dolium perdix*.

White, in the 'List of Crustacea in the Collection of the British Museum,' p. 60, adopts Herbst's earlier name of *Cancer megistos* for this species; but, as the description and figure of *C. megistos* are wanting in the only copy of Herbst's work that I have seen, I retain for the present Milne-Edwards's designation of *Pagurus punctulatus*, by which this species is generally known.

#### PARRIBACUS ANTARCTICUS.

*Scyllarus antarcticus*, Lund, Skrivt. Naturh. Selsk. Kjöben. Bd. ii. Heft 2, p. 22 (1793); Fabr. Ent. Syst. Suppl. p. 399 (1798).

*Ibacus antarcticus*, M.-Edw. Hist. Nat. Crust. ii. p. 287 (1837).

*Parribacus antarcticus*, Dana, U.S. Expl. Exp. xiii. Crust. i. p. 517, pl. xxxii. fig. 6 (1852).

Two specimens, a male and a female, were collected. The male has the appendages (pleopoda) of the second and third abdominal segments much larger than those of the female, foliaceous, and equally developed; in those of the fourth and fifth segments the inner ramus is rudimentary. In the female the third, fourth, and fifth segments have the inner ramus of the appendages produced, substyliform, and two-jointed at its extremity.

#### LYSIOSQUILLA MACULATA.

*Squilla maculata*, Fabr. Ent. Syst. ii. p. 511 (1793); Lamarek, Hist. Ann. sans Vert. v. p. 188 (1818); M.-Edw. Hist. Nat. Crust. ii. p. 518 (1837).

*Cancer (Mantis) arenarius*, Herbst. Naturg. Krabben u. Krebse, ii. p. 96, pl. xxxiii. fig. 2 (1796).

One specimen, a male, of this common Indo-Pacific species is in the collection. It is of rather small size (about 8 inches). This species, when fully grown, is probably the largest of the genus.





Robert. H. Rippon del, et lith

M&N Hanhart imp

NEW LEPIDOPTERA FROM DUKE OF YORK ISLAND



